

***Request for Proposal***

**242-9003**

Purchase of Fire Trucks

***Opens: March 11<sup>th</sup>, 2004  
2:00 p.m.***



*Venice of America*

**City of Fort Lauderdale**

***Issued for Fire Rescue  
By the Procurement & Materials Management Division***

**James Hemphill  
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***Visit us on the web at [www.fortlauderdale.gov/purchasing](http://www.fortlauderdale.gov/purchasing)***

***(954) 828-5140***

**City of Fort Lauderdale**  
**GENERAL CONDITIONS**

These instructions are standard for all contracts for commodities or services issued through the City of Fort Lauderdale Division of Purchasing. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Invitation to Bid (ITB) Special Conditions, Technical Specifications, Instructions, Proposal Pages, Addenda, and Legal Advertisement.

**PART I BIDDER PROPOSAL PAGE(S) CONDITIONS:**

- 1.01 **BIDDER ADDRESS:** The City maintains automated vendor mailing lists for each specific Commodity Class Item. Invitation to Bid (ITB'S) will be mailed first to a selection of Bidders who have fully registered on our system. Requests will be mailed to unregistered Bidders within a reasonable time frame for that bid only. Neither the mailing of one ITB to the vendor, nor a bid in return, will register a vendor on our system. If you wish purchase orders sent to a different address, please so indicate. If you wish payments sent to a different address, please so indicate on your invoice.
- 1.02 **DELIVERY:** Time will be of the essence for any orders placed as a result of this ITB. The City reserves the right to cancel any orders, or part thereof, without obligation if delivery is not made in accordance with the schedule specified by the Bidder and accepted by the City.
- 1.03 **PAYMENT TERMS AND CASH DISCOUNTS:** Payment terms, unless otherwise stated in this ITB, will be considered to be net 30 days after the date of satisfactory delivery at the place of acceptance and receipt of correct invoice at the office specified, whichever occurs last. Bidder may offer cash discounts for prompt payment but they will not be considered in determination of award. If a Bidder offers a discount, it is understood that the discount time will be computed from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.
- 1.04 **TOTAL BID DISCOUNT:** If Bidder offers a discount for award of all items listed in the bid, such discount shall be deducted from the total of the firm net unit prices bid and shall be considered in tabulation and award of bid.
- 1.05 **BIDS FIRM FOR ACCEPTANCE:** Bidder warrants, by virtue of bidding, that his bid and the prices quoted in his bid will be firm for acceptance by the City for a period of ninety (90) days from the date of bid opening unless otherwise stated in the ITB.
- 1.06 **VARIANCES:** For purposes of bid evaluation, Bidder's must indicate any variances, no matter how slight, from ITB General Conditions, Special Conditions, Specifications or Addenda in the space provided in the ITB. No variations or exceptions by a Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and referenced in the space provided on the bidder proposal pages. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.

By receiving a bid, City does not necessarily accept any variances contained in the bid. All variances submitted are subject to review and approval by the City. If any bid contains material variances that, in the City's sole opinion, make that bid conditional in nature, the City reserves the right to reject the bid or part of the bid that is declared, by the City as conditional.

- 1.07 **NO BIDS:** If you do not intend to bid please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason, in the space provided in this ITB. Failure to bid or return no bid comments prior to the bid due and opening date and time, indicated in this ITB, may result in your firm being deleted from our Bidder's registration list for the Commodity Class Item requested in this ITB.
- 1.08 **MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS DEFINITIONS:** The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in it's purchasing activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term 'Minority Business Enterprise' means a business at least 51 percent of which is owned by minority group members or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

Women Business Enterprise (WBE) a "Women Owned or Controlled Business is a business enterprise at least 51 percent of which is owned by females or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK, which includes persons having origins in any of the Black racial groups of Africa.

WHITE, which includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.

HISPANIC, which includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.

NATIVE AMERICAN, which includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.

ASIAN AMERICAN, which includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

1.09 **MINORITY-WOMEN BUSINESS ENTERPRISE PARTICIPATION**

It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the City does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms. Proposers are requested to include in their proposals a narrative describing their past accomplishments and intended actions in this area. If proposers are considering minority or women owned enterprise participation in their proposal, those firms, and their specific duties have to be identified in the proposal. If a proposer is considered for award, he will be asked to meet with City staff so that the intended MBE/WBE participation can be formalized and included in the subsequent contract.

1.09(a) Certification by Broward County, Florida

**CERTIFICATION BY BROWARD COUNTY, FL:** If awarded a contract or purchase order as a result of this solicitation, and if the awarded contractor/vendor is claiming minority status in accordance with Section 1.08 of the General Conditions, then said awarded contractor/vendor shall apply for certification by Broward County, Florida, Division of Equal Employment and Small Business Opportunity. Contractor/vendor shall provide documentation of application status, and once approved or disapproved by Broward County, must also provide that documentation to the Purchasing Division of the City of Fort Lauderdale.

**Part II DEFINITIONS/ORDER OF PRECEDENCE:**

- 2.01 **BIDDING DEFINITIONS:** The City will use the following definitions in its general conditions, special conditions, technical specifications, instructions to bidders, addenda and any other document used in the bidding process:  
INVITATION TO BID (ITB) when the City is requesting bids from qualified Bidders.  
REQUEST FOR PROPOSALS (RFP) when the City is requesting proposals from qualified Proposers.  
BID – a price and terms quote received in response to an ITB.  
PROPOSAL – a proposal received in response to an RFP.  
BIDDER – Person or firm submitting a Bid.  
PROPOSER – Person or firm submitting a Proposal.  
RESPONSIVE BIDDER – A person whose bid conforms in all material respects to the terms and conditions included in the ITB.  
RESPONSIBLE BIDDER – A person who has the capability in all respects to perform in full the contract requirements, as stated in the ITB, and the integrity and reliability that will assure good faith performance.  
FIRST RANKED PROPOSER – That Proposer, responding to a City RFP, whose Proposal is deemed by the City, the most advantageous to the City after applying the evaluation criteria contained in the RFP.  
SELLER – Successful Bidder or Proposer who is awarded a Purchase Order or Contract to provide goods or services to the City.  
CONTRACTOR – Successful Bidder or Proposer who is awarded a Purchase Order, award Contract, Blanket Purchase Order agreement, or Term Contract to provide goods or services to the City.  
CONTRACT – A deliberate verbal or written agreement between two or more competent parties to perform or not to perform a certain act or acts, including all types of agreements, regardless of what they may be called, for the procurement or disposal of equipment, materials, supplies, services or construction.  
CONSULTANT – Successful Bidder or Proposer who is awarded a contract to provide professional services to the City.  
The following terms may be used interchangeably by the City: ITB, or RFP; Bid or Proposal; Bidder, Proposer, or Seller; Contractor or Consultant; Contract, Award, Agreement, or Purchase Order.
- 2.02 **SPECIAL CONDITIONS:** Any and all Special Conditions contained in this ITB that may be in variance or conflict with these General Conditions shall have precedence over these General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety,

**PART III BIDDING AND AWARD PROCEDURES:**

- 3.01 **SUBMISSION AND RECEIPT OF BIDS:** To receive consideration, bids must be received prior to the bid opening date and time. Unless otherwise specified, Bidder's should use the proposal forms provided by the City. These forms may be duplicated, but failure to use the forms may cause the bid to be rejected. Any erasures or corrections on the bid must be made in ink and initialed by Bidder in ink. All information submitted by the Bidder shall be printed, typewritten or filled in with pen and ink. Bids shall be signed in ink. Separate bids must be submitted for each ITB issued by the City in separate sealed envelopes properly marked. When a particular ITB or RFP requires multiple copies of bids or proposals they may be included in a single envelope or package properly sealed and identified. Only send bids via facsimile transmission (FAX) if the ITB specifically states that bids sent via FAX will be considered. If such a statement is not included in the ITB, bids sent via FAX will be rejected. Bids will be publicly opened in the Purchasing Office, or other designated area, in the presence of Bidder's, the public, and City staff. Bidders and the public are invited and encouraged to attend bid openings. Bids will be tabulated and made available for review by Bidder's and the public in accordance with applicable regulations.
- 3.02 **MODEL NUMBER CORRECTIONS:** If the model number for the make specified in this ITB is incorrect, or no longer available and replaced with an updated model with new specifications, the Bidder shall enter the correct model number on the bidder proposal page. In the case of an updated model with new specifications, Bidder shall provide adequate information to allow the City to determine if the model bid meets the City's requirements.
- 3.03 **PRICES QUOTED:** Deduct trade discounts, and quote firm net prices. Give both unit price and extended total. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.
- 3.04 **TAXES:** The City of Fort Lauderdale is exempt from Federal Excise and Florida Sales taxes on direct purchase of tangible property. Exemption number for Federal Excise taxes is 59-74-0111K, and State Sales tax exemption number is 16-03-196479-54C.
- 3.05 **WARRANTIES OF USAGE:** Any quantities listed in this ITB as estimated or projected are provided for tabulation and information purposes only. No warranty or guarantee of quantities is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.

- 3.06 **APPROVED EQUAL:** When the technical specifications call for a brand name, manufacturer, make, model, or vendor catalog number with acceptance of APPROVED EQUAL, it shall be for the purpose of establishing a level of quality and features desired and acceptable to the City. In such cases, the City will be receptive to any unit that would be considered by qualified City personnel as an approved equal. In that the specified make and model represent a level of quality and features desired by the City, the Bidder must state clearly in his bid any variance from those specifications. It is the Bidder's responsibility to provide adequate information, in his bid, to enable the City to ensure that the bid meets the required criteria. If adequate information is not submitted with the bid, it may be rejected. The City will be the sole judge in determining if the item bid qualifies as an approved equal.
- 3.07 **MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS:** The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet, or exceed these items, and feels that the technical specifications are overly restrictive, he must notify the Purchasing Division immediately. Such notification must be received by the Purchasing Division prior to the deadline contained in the ITB, for questions of a material nature, or prior to five (5) days before bid due and open date, whichever occurs first. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all bidders.
- 3.08 **MISTAKES:** Bidders are cautioned to examine all terms, conditions, specifications, drawings, exhibits, addenda, delivery instructions and special conditions pertaining to the ITB. Failure of the Bidder to examine all pertinent documents shall not entitle him to any relief from the conditions imposed in the contract .
- 3.09 **SAMPLES AND DEMONSTRATIONS:** Samples or inspection of product may be requested to determine suitability. Unless otherwise specified in Special Conditions, samples shall be requested after the date of bid opening, and if requested should be received by the City within seven (7) working days of request. Samples, when requested, must be furnished free of expense to the City and if not used in testing or destroyed, will upon request of the Bidder, be returned within thirty (30) days of bid award at Bidder's expense. When required, the City may request full demonstrations of units prior to award. When such demonstrations are requested, the Bidder shall respond promptly and arrange a demonstration at a convenient location. Failure to provide samples or demonstrations as specified by the City may result in rejection of a bid.
- 3.10 **LIFE CYCLE COSTING:** If so specified in the ITB, the City may elect to evaluate equipment proposed on the basis of total cost of ownership. In using Life Cycle Costing, factors such as the following may be considered: estimated useful life, maintenance costs, cost of supplies, labor intensity, energy usage, environmental impact, and residual value. The City reserves the right to use those or other applicable criteria, in its sole opinion, that will most accurately estimate total cost of use and ownership.
- 3.11 **BIDDING ITEMS WITH RECYCLED CONTENT:** In addressing environmental concerns, the City of Fort Lauderdale encourages Bidders to submit bids or alternate bids containing items with recycled content. When submitting bids containing items with recycled content, Bidder shall provide documentation adequate for the City to verify the recycled content. The City prefers packaging consisting of materials that are degradable or able to be recycled. When specifically stated in the ITB, the City may give preference to bids containing items manufactured with recycled material or packaging that is able to be recycled.
- 3.12 **USE OF OTHER GOVERNMENTAL CONTRACTS:** The City reserves the right to reject any part or all of any bids received and utilize other available governmental contracts, if such action is in its best interest.
- 3.13 **QUALIFICATIONS/INSPECTION:** Bids will only be considered from firms normally engaged in providing the types of commodities/services specified herein. The City reserves the right to inspect the Bidder's facilities, equipment, personnel, and organization at any time, or to take any other action necessary to determine Bidder's ability to perform. The Purchasing Manager reserves the right to reject bids where evidence or evaluation is determined to indicate inability to perform.
- 3.14 **BID SURETY:** If Special Conditions require a bid security, it shall be submitted in the amount stated. A bid security can be in the form of a bid bond, postal money order, cashiers check, or irrevocable letter of credit. Bid security will be returned to the unsuccessful bidders as soon as practicable after opening of bids. Bid security will be returned to the successful bidder after acceptance of the performance bond or irrevocable letter of credit, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; and full execution of contract documents, if required; or conditions as stated in Special Conditions.
- 3.15 **PUBLIC RECORDS:** Florida law provides that municipal records shall at all times be open for personal inspection by any person. Section 119.01, F.S., The Public Records Law. Information and materials received by City in connection with an ITB response shall be deemed to be public records subject to public inspection upon award, recommendation for award, or 10 days after bid opening, whichever occurs first. However, certain exemptions to the public records law are statutorily provided for in Section 119.07, F.S. If the Proposer believes any of the information contained in his or her response is exempt from the Public Records Law, then the Proposer, must in his or her response, specifically identify the material which is deemed to be exempt and cite the legal authority for the exemption, otherwise, the City will treat all materials received as public records.
- 3.16 **PROHIBITION OF INTEREST:** No contract will be awarded to a bidding firm who has City elected officials, officers or employees affiliated with it, unless the bidding firm has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's bidder lists and prohibition from engaging in any business with the City.
- 3.17 **RESERVATIONS FOR AWARD AND REJECTION OF BIDS:** The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.  
If the ITB provides for a contract trial period, the City reserves the right, in the event the selected bidder does not perform satisfactorily, to award a trial period to the next ranked bidder or to award a contract to the next ranked bidder, if that bidder has successfully provided services to the City in the past. This procedure to continue until a bidder is selected or the contract is re-bid, at the sole option of the City.

- 3.18 **LEGAL REQUIREMENTS:** Applicable provisions of all federal, state, county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.

#### **PART IV BONDS AND INSURANCE**

- 4.01 **PERFORMANCE BOND/IRREVOCABLE LETTER OF CREDIT:** If a performance bond or irrevocable letter of credit is required in Special Conditions, the Contractor shall within fifteen (15) working days after notification of award, furnish to the City a Performance Bond or an Unconditional Irrevocable Letter of Credit payable to the City of Fort Lauderdale, Florida, in the face amount specified in Special Conditions as surety for faithful performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Performance Bond. The Performance Bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida and having a resident agent. If a Letter of Credit is chosen, it must be in a form acceptable to the City, drawn on a local (Broward, Dade or Palm Beach Counties) bank acceptable to the City and issued in favor of the City of Fort Lauderdale, Florida. If a Bidder wishes to use a non-local bank, he must have prior City approval of the requirements to draw against the Letter of Credit.

Acknowledgement and agreement is given by both parties that the amount herein set for the Performance Bond or Irrevocable Letter of Credit is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

- 4.02 **INSURANCE:** If the Contractor is required to go on to City property to perform work or services as a result of ITB award, the Contractor shall assume full responsibility and expense to obtain all necessary insurance as required by City or specified in Special Conditions.

The Contractor shall provide to the Purchasing Division original certificates of coverage and receive notification of approval of those certificates by the City's Risk Manager prior to engaging in any activities under this contract. The Contractor's insurance is subject to the approval of the City's Risk Manager. The certificates must list the City as an **ADDITIONAL INSURED** and shall have no less than thirty (30) days written notice of cancellation or material change. Further modification of the insurance requirements may be made at the sole discretion of the City's Risk Manager if circumstances change or adequate protection of the City is not presented. Bidder, by submitting his bid, agrees to abide by such modifications.

#### **PART V PURCHASE ORDER AND CONTRACT TERMS:**

- 5.01 **COMPLIANCE TO SPECIFICATIONS, LATE DELIVERIES/PENALTIES:** Items offered may be tested for compliance to bid specifications. Items delivered which do not conform to bid specifications may be rejected and returned at Contractor's expense. Any violation resulting in contract termination for cause or delivery of items not conforming to specifications, or late delivery may also result in:

- Bidder's name being removed from the City's bidder's mailing list for a specified period and Bidder will not be recommended for any award during that period.
- All City Departments being advised to refrain from doing business with the Bidder.
- All other remedies in law or equity.

- 5.02 **ACCEPTANCE, CONDITION, AND PACKAGING:** The material delivered in response to ITB award shall remain the property of the Seller until a physical inspection is made and the material accepted to the satisfaction of the City. The material must comply fully with the terms of the ITB, be of the required quality, new, and the latest model. All containers shall be suitable for storage and shipment by common carrier, and all prices shall include standard commercial packaging. The City will not accept substitutes of any kind. Any substitutes or material not meeting specifications will be returned at the Bidder's expense. Payment will be made only after City receipt and acceptance of materials or services.

- 5.03 **SAFETY STANDARDS:** All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupational Safety and Health Act of 1970 as amended, and be in compliance with Chapter 442, Florida Statutes. Any toxic substance listed in Section 38F-41.03 of the Florida Administrative Code delivered as a result of this order must be accompanied by a completed Material Safety Data Sheet (MSDS).

- 5.04 **ASBESTOS STATEMENT:** All material supplied must be 100% asbestos free. Bidder, by virtue of bidding, certifies that if awarded any portion of the ITB he will supply only material or equipment that is 100% asbestos free.

- 5.05 **OTHER GOVERNMENTAL ENTITIES:** If the Bidder is awarded a contract as a result of this ITB, he will, if he has sufficient capacity or quantities available, provide to other governmental agencies, so requesting, the products or services awarded in accordance with the terms and conditions of the ITB and resulting contract. Prices shall be F.O.B. delivered to the requesting agency.

- 5.06 **VERBAL INSTRUCTIONS PROCEDURE:** No negotiations, decisions, or actions shall be initiated or executed by the Contractor as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Contractors, which are assigned by a person designated as authorized to bind the Contractor, will be recognized by the City as duly authorized expressions on behalf of Contractors.

- 5.07 **INDEPENDENT CONTRACTOR:** The Contractor is an independent contractor under this Agreement. Personal services provided by the Proposer shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security, health insurance, employee benefits, purchasing policies unless otherwise stated in this ITB, and other similar administrative procedures applicable to services rendered under this contract shall be those of the Contractor.

- 5.08 **INDEMNITY/HOLD HARMLESS AGREEMENT:** The Contractor agrees to protect, defend, indemnify, and hold harmless the City of Fort Lauderdale and its officers, employees and agents from and against any and all losses, penalties, damages, settlements, claims, costs, charges for other expenses, or liabilities of every and any kind including attorney fees, in connection with or arising directly or indirectly out of the work agreed to or performed by Contractor under the terms of any agreement that may arise due to the bidding process. Without limiting the foregoing, any and all such claims, suits, or other actions relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged violations of any applicable Statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder.

- 5.09 **TERMINATION FOR CAUSE:** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the provisions of this Agreement, the City may upon written notice to the Contractor terminate the right of the Contractor to proceed under this Agreement, or with such part or parts of the Agreement as to which there has been default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed to the satisfaction of the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.
- 5.10 **TERMINATION FOR CONVENIENCE:** The City reserves the right, in its best interest as determined by the City, to cancel contract by giving written notice to the Contractor thirty (30) days prior to the effective date of such cancellation.
- 5.11 **CANCELLATION FOR UNAPPROPRIATED FUNDS:** The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.
- 5.12 **RECORDS/AUDIT:** The Contractor shall maintain during the term of the contract all books of account, reports and records in accordance with generally accepted accounting practices and standards for records directly related to this contract. The form of all records and reports shall be subject to the approval of the City's Internal Auditor. The Contractor agrees to make available to the City's Internal Auditor, during normal business hours and in Broward, Dade or Palm Beach Counties, all books of account, reports and records relating to this contract for the duration of the contract and retain them for a minimum period of one (1) year beyond the last day of the contract term.
- 5.13 **PERMITS, TAXES, LICENSES:** The successful Contractor shall, at his own expense, obtain all necessary permits, pay all licenses, fees and taxes, required to comply with all local ordinances, state and federal laws, rules and regulations applicable to business to be carried on under this contract.
- 5.14 **LAWS/ORDINANCES:** The Contractor shall observe and comply with all Federal, state, local and municipal laws, ordinances rules and regulations that would apply to this contract.
- 5.15 **NON-DISCRIMINATION:** There shall be no discrimination as to race, sex, color, creed, age or national origin in the operations conducted under this contract.
- 5.16 **UNUSUAL CIRCUMSTANCES:** If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party to the contract occur, and those circumstances significantly affect the Contractor's cost in providing the required items or services, then the Contractor may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Contractor, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:
1. The contract can be canceled by the City upon giving thirty (30) days written notice to the Contractor with no penalty to the City or Contractor. The Contractor shall fill all City requirements submitted to the Contractor until the termination date contained in the notice.
  2. The City requires the Contractor to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
  3. If the City, in its interest and in its sole opinion, determines that the Contractor in a capricious manner attempted to use this section of the contract to relieve themselves of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Contractor in default and disqualifying him for receiving any business from the City for a state period of time.
- If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Contractor receives notice in writing signed by a person authorized to bind the City in such matters.
- 5.17 **ELIGIBILITY:** If applicable, the Contractor must first register with the Department of State of the State of Florida, in accordance with Florida State Statutes, prior to entering into a contract with the City.
- 5.18 **PATENTS AND ROYALTIES:** The Contractor, without exception, shall indemnify and save harmless the City and its employees from liability of any nature and kind, including cost and expenses for or on account of any copyrighted, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, including its use by the City. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.
- 5.19 **ASSIGNMENT:** Contractor shall not transfer or assign the performance required by this ITB without the prior written consent of the City. Any award issued pursuant to this ITB, and the monies, which may become due hereunder, are not assignable except with the prior written approval of the City Manager or selected designee.
- 5.20 **LITIGATION VENUE:** The parties waive the privilege of venue and agree that all litigation between them in the state courts shall take place in Broward County, Florida and that all litigation between them in the federal courts shall take place in the Southern District in and for the State of Florida.

PROPOSAL SIGNATURE PAGE

TO: The City of Fort Lauderdale

The below signed hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the RFP. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal. I certify that I have not divulged to, discussed with, or compared this bid/proposal with any other bidder/Proposer(s) and have not colluded with and any other bidder/Proposer(s) or parties to this bid/proposal. I further certify that I am authorized to contractually bind the bidding/proposing firm.

**Bid/Proposal submitted by:**

Name (printed) \_\_\_\_\_

Title: \_\_\_\_\_

Firm/Corporation: \_\_\_\_\_

Address: \_\_\_\_\_

City \_\_\_\_\_ State: \_\_\_\_\_ Zip \_\_\_\_\_ + \_\_\_\_\_

Telephone No. (\_\_\_\_) \_\_\_\_ - \_\_\_\_\_ FAX No. (\_\_\_\_) \_\_\_\_ - \_\_\_\_\_

e-mail address: \_\_\_\_\_

www. \_\_\_\_\_

Was this proposal sent to the correct address? If NOT, please check here,  and indicate correct address above.

Does your firm qualify for MBE, WBE, or SBE status, in accordance with *Section 1.08* of the General Conditions?

MBE \_\_\_\_ WBE \_\_\_\_ SBE \_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**PROPOSERS PLEASE INSURE THAT YOU HAVE SIGNED THE SIGNATURE PAGE OF THESE PROPOSAL PAGES. OMISSION OF A SIGNATURE ON THIS PAGE WILL RESULT IN REJECTION OF YOUR PROPOSAL**

**COMPLETE AND RETURN THE REQUIRED NUMBER OF PROPOSAL PAGES AND ATTACHMENTS.**

PROPOSAL IDENTIFICATION: Please indicate on the face of your sealed proposal package the following:

**RFP NO. 242-9003**

**OPENS : March 11, 2004**

Addendum Acknowledgement and Statement of Variances:

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in his proposal:

Addendum No. Date Issued

VARIANCES: State any variations to specifications, terms and conditions in the space provided below or reference in the space provided below all variances contained on other pages of RFP, attachments or proposal pages. No variations or exceptions by the Proposer will be deemed to be part of the proposal submitted unless such variation or exception is listed and contained within the proposal documents and referenced in the space provided below. If no statement is contained in the below space, it is hereby implied that your proposal complies with the full scope of this RFP.

Variances:

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## PART I - INTRODUCTION/INFORMATION

### 01. PURPOSE:

The City of Fort Lauderdale, Florida is seeking proposals from qualified firms, hereinafter referred to as the contractor, to provide numerous Surface Fire Pumper apparatus vehicles (ALS Engines), and Aerial Apparatus vehicles for the City's Fire Rescue Department, in accordance with the terms, conditions, and specifications contained in this Request for Proposals (RFP). Items are anticipated to be purchased over a five-year period, until September of 2009.

Purchases are planned as follows:

AERIALS: 1 ea. in FY 03-04; 1 ea. in FY 06-07; 1 ea. in FY 08-09. **(TOTAL OF 3)**

PUMPERS: 4ea in FY 03-04; 2ea in FY06-07; 3ea in FY 07-08; 2ea in FY08-09. **(TOTAL OF 11)**

The City's fiscal year (FY) is from October 1<sup>st</sup> to September 31<sup>st</sup>. All planned purchases beyond September 31<sup>st</sup>, 2004 are contingent upon City Commission approval. The obligations of the City under this award are subject to the availability of funds lawfully appropriated and budgeted for this project.

### 02. WARRANTIES OF USAGE

Any estimated quantities listed are for information and tabulation purposes only. No warranty or guarantee of quantities needed is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.

### 03. INFORMATION OR CLARIFICATION:

For information concerning procedures for responding to this RFP, contact the Procurement Specialist, James Hemphill at (954) 828-5143. For information concerning the technical specifications or scope of services, contact Steve Kasner at (954) 828-5654. Such contact shall be for clarification purposes only. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum.

It is preferred that all questions be submitted in writing to the Purchasing Division, 100 North Andrews Avenue, Fort Lauderdale, FL, 33301; ATTN: James Hemphill. To facilitate prompt receipt of questions, they can be sent via FAX to (954) 828-5576 ATTN: James Hemphill, or VIA e-mail to: [jhemphill@fortlauderdale.gov](mailto:jhemphill@fortlauderdale.gov). Questions of a material nature must be received prior to the cut-off date specified in the RFP Schedule.

Proposers please note: No part of your proposal can be submitted via FAX. The entire proposal must be submitted in accordance with the Instructions to Proposers contained in this RFP.

### 04. RESERVATION FOR REJECTIONS AND AWARD

The City of Fort Lauderdale reserves the right to accept or reject any or all proposals or parts of proposals, to waive irregularities and technicalities, and to request re-proposals. The City also reserves the right to award the contract on such items the City deems will best serve the interest of the City. The City further reserves the right to award the contract on a 'split order' basis, or such combination as shall best serve the interests of the city unless otherwise specified.

### 05. INTERPRETATION OF BIDDING DOCUMENTS:

Only the interpretation or correction so given by the Purchasing Manager, City of Fort Lauderdale or his designee, in writing, shall be binding and prospective proposers are advised that no other source is authorized to give information concerning, or to explain or interpret, the RFP documents.

### 06. LOBBYIST ACTIVITIES

ALL BIDDERS/PROPOSERS PLEASE NOTE: Any bidder or proposer submitting a response to this solicitation must comply, if applicable, with City of Fort Lauderdale Ordinance No. C-00-27, Lobbying Activities. Copies of Ordinance No. C-00-27 may be obtained from the City Clerk's Office on the 7th Floor of City Hall, 100 N. Andrews Avenue, Fort Lauderdale, Florida. The ordinance may also be viewed on the City's website at <http://ci.fort-lauderdale.fl.us/documents/index.htm>.

**Part II - Request For Proposal Schedule**

Release Request For Proposal	02/06/04
Last day for receipt of questions of Questions of a Material Nature	02/26/04
Release of Addendum (If Required)	03/01/04
<b>Proposal Due (Prior to 2:00 PM)</b>	<b>03/11/04</b>
Evaluation Committee Review and Short Listing of Proposals (Estimated)	03/22/04
Oral Interviews with Finalists and Selection of First ranked Proposer (Estimated)	03/30/04
Presented to City Commission for Award of Purchase (Estimated)	04/20/04

**PART III - SPECIAL CONDITIONS**

01. **GENERAL CONDITIONS**  
RFP General Conditions Form G-107 Rev. 1/92 (GC) are included and made a part of this RFP as Exhibit "A".
02. **VARIANCES**  
While the City allows Contractors to take variances to the RFP terms, conditions, and specifications, the number and extent of variances taken will be considered in determining proposal responsiveness and in allocating proposal evaluation points. See Section 1.06 of GC.
03. **NEWS RELEASES/PUBLICITY**  
News releases, publicity releases, or advertisements relating to this contract or the tasks or projects associated with the project shall not be made without prior City approval.
04. **RFP DOCUMENTS**  
The Contractor shall examine this RFP carefully. Ignorance of the requirements will not relieve the Contractor from liability and obligations under the Contract.
05. **PROPOSERS' COSTS**  
The City shall not be liable for any costs incurred by proposers in responding to this RFP.
06. **RULES AND PROPOSALS**  
The signer of the proposal must declare that the only person(s), company or parties interested in the proposal as principals are named therein; that the proposals is made without collusion with any other person(s), company or parties submitting a proposal; that it is in all respects fair and in good faith, without collusion or fraud; and that the signer of the proposals has full authority to bind the principal proposer.
07. **CONFIDENTIAL INFORMATION**  
Florida law provides that municipal records shall at all times be open for personal inspection by any person. Section 119.01 F.S., The Public Records Law. Information and materials received by City in connection with all proposer's response shall be deemed to be public records subject to public inspection upon award, recommendation for award or 10 days after bid opening, whichever occurs first. However, certain exemptions to the public records law are statutorily provided for in Section 119.07, F.S. Therefore, if the proposer believes any of the information contained in his or her response is exempt from the Public Records Law, then the proposer must in his or her response specifically identify the material which is deemed to be exempt and cite the legal authority for the exemption, otherwise, the city will treat all materials received as public records.
08. **PUBLIC ENTITY CRIMES**  
A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in section 287.017, Florida Statutes, for category two(2) for a period of 36 months from the date of being placed on the convicted vendor list.
09. **APPROVED EQUAL OR ALTERNATE PRODUCT PROPOSALS**  
The technical specification contained in this Request For Proposal are to be used as a reference only and are not to be considered of a proprietary nature. These specifications represent a level of quality and features, which are desired by the city. The city is receptive to any product, which would be considered by qualified city personnel as an approved equal.

09. **APPROVED EQUAL OR ALTERNATE PRODUCT PROPOSALS (Cont.)**  
The proposer must state clearly in his proposal pages any variances to the specifications. If proposing an approved equal or alternate product, it will be the proposer's responsibility to provide adequate information in their proposal to enable the City to ensure that the proposal meets the required criteria. If adequate information is not submitted with the proposal, it may be rejected. The City of Fort Lauderdale will be the sole judge in determining if the product proposed qualifies as approved equal. The City reserves the right to award to that proposal which will best serve the interest of the City as determined by the City. The City further reserves the right to waive minor variations to specifications and in the bidding process.
10. **MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS**  
The technical specifications contained in this request for proposal may include items that are considered minimum, mandatory or required. If a proposer is unable to meet these requirements and feels that the technical specifications are overly restrictive, he must notify the Purchasing Division. Such notifications must be received prior to the deadline for questions of a material nature or five (5) days prior to proposal due and open date, whichever occurs first. If no such notification is prior to the deadline, the City will consider the technical specifications to be acceptable to all proposers.
11. **AWARD**  
The City of Fort Lauderdale will be the sole judge in determining if the product proposed and delivery time meets our requirements. The City reserves the right to award to that bidder which will best serve the interest of the City as determined by the City. The City further reserves the right to waive minor variations to the specifications and in the proposal procedure.
12. **INVOICES/PAYMENT:**  
The City will accept an invoice for each vehicle that has been received and accepted by the City. The city will attempt to make payments within twenty (20) days after receipt of an invoice acceptable to the City.
13. **TAXES AND PERMITS:**  
The State, any county, municipality or political subdivision of this State is exempt from the sales tax, except this exemption shall not include sales of tangible personal property made to contractors employed either directly or as agents of any such government or political subdivision thereof when such tangible personal property goes into or becomes a part of public works owned by such government or political subdivision thereof. The bidder shall take these factors into consideration in preparing his proposal, including therein the cost of the State and Use Tax on materials, but excluding the cost of those taxes and permits not applicable.
14. **CONTRACT PERIOD**  
The initial contract term shall commence upon final execution of the contract by the City and shall be for a FIVE (5) year period; provided that the services rendered by the proposer during the contract period are satisfactory and that funding is available, as appropriated on an annual basis and upon completion of the expressed and/or implied warranty period. The price offered by the Proposer in this proposal shall be based on purchases / service for the first year. Four (4) additional one (1) year renewals, if mutually acceptable to the City and the awardee, shall be executed through purchase orders.
15. **PRICES/F.O.B. POINT**  
All prices offered shall be firm and fixed for the first year of the contract. All prices shall be F.O.B. delivered to the ordering agency in the City of Fort Lauderdale, Florida. After the initial firm pricing period, The City anticipates purchasing additional vehicles as specified herein. The successful bidder may either elect to offer future sales at bid prices listed herein, or may submit price changes indexed to the Producer Price Index (PPI).

## 16. COST ADJUSTMENTS:

The cost for vehicles as bid shall remain firm for the first year of the contract. Costs for subsequent years shall be subject to an adjustment only if increases occur in the industry, but unless very unusual and significant changes have occurred in the industry, such increases shall not exceed 5% per year or, whichever is less, the latest yearly percentage (%) increase or decrease calculated using the U.S. Department of Labor, Bureau of Labor Statistic's Producer Price Index (PPI) under Category Series WPU141106 for Truck, over 10,000 LBS.GVW. The yearly increase, or decrease in the PPI shall be that latest Index published and available ninety (90) days prior to the end of the contract year then in effect compared to the index for the comparable month one year prior. Any requested cost increase shall be fully documented and submitted to the City at least ninety (90) days prior to the contract anniversary date. Any approved cost adjustments shall become effective upon the anniversary date of the contract. In the event the CPI or industry costs decline, the City shall have the right to receive, from the Contractor, a reasonable reduction in costs that reflect such cost changes in the industry.

The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the contract can be cancelled by the City upon giving thirty (30) days written notice to the Contractor.

## 17. PENALTIES FOR NON-PERFORMANCE:

If the contractor delivers a vehicle with equipment or manufactured that is of a lesser quality than specified by the contractor in his proposal, the City will deny the acceptance of that vehicle. The City will make every effort to allow the contractor to immediately remedy any deficiencies. If the City is required to put a vehicle into service with deficiencies, the City will deduct from the proposal/performance security first and if that is exhausted then the purchase price the City's estimated cost to bring the vehicle up to standard as proposed. When remedies of the deficiencies can be scheduled at a later date, the City will make every effort to allow the contractor to complete the remedies and receive payment. However, the need for service and future support will prevail and the extent of the deficiencies will be a consideration. Therefore, the City reserves the right to have a different Contractor complete the remedies. Contractor shall provide to the City at no cost to the City replacement vehicles similar to those proposed and accepted by the City during the time the deficiencies are being corrected.

## 18. INSURANCE

The Contractor shall not commence operations, construction and/or installation of improvements pursuant to the terms of this Agreement until certification or proof of insurance, detailing terms and provisions of coverage, has been received and approved by the City of Fort Lauderdale Risk Manager.

The Contractor shall carry at all times the following insurance coverage:

## WORKER'S COMPENSATION &amp; EMPLOYER'S LIABILITY INSURANCE:

Worker's Compensation for all Contractor employees: **Statutory 440-055.**

Employer's Liability: **\$500,000.00**

## COMMERCIAL GENERAL LIABILITY INSURANCE:

Combined single Limit Bodily Injury/Property Damage with minimum limits of **\$1,000,000.**

This coverage must include Coverage for the liability assumed by the contractor under the indemnity provision of the contract.

## AUTOMOBILE LIABILITY INSURANCE:

Bodily Injury - **\$250,000** each person

**\$500,000** each occurrence

Property Damage - **\$100,000** each occurrence

Combined Single Limit - **\$1,000,000** (Bodily Injury and Property Damage Combined)

## 18. INSURANCE (Cont.):

The City shall be named as an additional insured for Commercial General Liability, only. All certificates of insurance must be submitted to the Purchasing Division and be approved by the City's Risk Manager prior to commencement of any work.

Waiver of Subrogation: All insurance policies of the contractor will be endorsed to waive all rights of subrogation against the City of Fort Lauderdale.

## 19. PAYMENT AND PERFORMANCE BOND:

Successful Contractor shall execute and deliver to the City of Fort Lauderdale, within ten (10) calendar days after notification of Award of Contract, a PAYMENT AND PERFORMANCE BOND, for the faithful performance of any agreement arising as a result of this solicitation. Said bond shall be in the form of a surety or a certified check. If a surety, the bond must be executed by a surety company of recognized standing, registered and authorized to do business in the State of Florida, Department of State Division of Corporations, and having a resident agent. The PAYMENT AND PERFORMANCE BOND shall be in the amount of 100% (ONE HUNDRED PERCENT) of the total unit price of TWO (2) apparatus. Bond must be renewed each year of the contract. The form of the Payment and Performance Bond shall be subject to the approval of the City's Risk Manager.

## 20. TORT IMMUNITY:

The City of Fort Lauderdale hereby reserves to itself any and all tort immunity as provided to it by the laws of the State of Florida. It is hereby agreed that the City's liability is limited to the extent permitted by the Florida Constitution and Florida Statute 768.28 or any amendments thereto.

## 21. MODIFICATION OF SERVICES (Deletions / Additions )

21.1 The City reserves the right to delete any portion of this Contract at any time without cause, and if such right is exercised by the City, the total fee shall be reduced in the same ratio as the estimated cost of the work deleted bears to the estimated cost of the work originally planned. If work has already been accomplished on the portion of the Contract to be deleted, the Contractor shall be paid for the deleted portion on the basis of the estimated percentage of completion of such portion.

21.3 The City may require additional items/duties of a similar nature, but not specifically listed in the contract. The Contractor agrees to provide such items/duties, and shall provide the City prices on such additional items or duties based upon a formula or method which is the same or similar to that used in establishing the prices in his Bid. If the price(s) offered are not acceptable to the City, and the situation cannot be resolved to the satisfaction of the City, the City reserves the right to procure those items from other vendors, or to cancel the contract upon giving the Contractor thirty (30) days written notice.

## 22. EXTENDED BID PRICES:

22.1 Bidder is requested to indicate if additional quantities of the items may be purchased at a price quoted herein: YES\_\_\_\_\_ or No\_\_\_\_\_, through date:\_\_\_\_\_.

22.2 Will you extend this bid under the same terms, specifications and conditions to other governmental entities? Please state YES\_\_\_\_\_ or NO\_\_\_\_\_.  
(Optional agreement – not required for bid award)

## PART IV - TECHNICAL SPECIFICATION/SCOPE OF SERVICES:

### 1.0 SCOPE, PURPOSE AND APPLICATION.

**1.1 Scope:** It is the intent of these specifications to cover the furnishing and delivery of complete apparatuses equipped as hereinafter specified with a view to obtaining the best results and the most acceptable apparatuses for service in the City of Fort Lauderdale. These specifications shall cover only the general requirement as to the type of construction and test to which the apparatus must conform, together with certain details as to finish, equipment and appliances with which the successful bidder must conform. Apparatus proposed by the bidder shall meet the requirements of the National Highway Traffic Administration, U.S. Department of Transportation Washington, D.C., the National Fire Protection Association (NFPA) as stated in current pamphlet 1901 for specified Fire Apparatus except where amended herein, and the Insurance Service Office (ISO).

**1.1.2 Purpose:** The purpose of this document is to provide minimum specifications and test parameters for the manufacture of custom fire pumpers and Quint aerial fire apparatuses that meets the needs and desires of the City. It establishes essential criteria for the design, performance, equipment, and appearance of the vehicle. The object is to provide a vehicle that is in accordance with all applicable and nationally recognized standard guidelines.

**1.2 Classification:** This specification calls for custom fire pumper vehicles and Quint aerial fire apparatuses manufactured in accordance with chapters 1 thru 9 of the National Fire Protection Associations most current pamphlet 1901.

New Automotive Pumper Fire Apparatus Class 1 - Two rear wheel driven (4x2).

And New Automotive Quint Aerial Fire Apparatus

**1.3 General:** This is an engineered, designed, constructed, and delivered type specification and it is not the intention of the City to eliminate vendors or manufacturers of similar or equal vehicles or equipment of the types specified. It should be noted however that this specification is written around specific needs of the City.

**1.3.1** The City reserves the right to adjust equipment quantities that are specified in this RFP.

**1.3.2 Examination of Specification:** Each proposer is required before submitting his/her proposal, to be thoroughly familiar with the requirements contained herein. No additional allowances will be made because of a lack of knowledge of these requirements. It is the responsibility of the successful proposer to ascertain if any components of this specification are unsafe or do not meet the required standards of applicable federal and state law specification, standard or criteria, or those of NFPA 1901 or Insurance Service Office Specification. Should there be any unsafe or poorly designed criteria contained herein, the proposer shall thoroughly explain them to the Purchaser in the Proposal.

**1.4 Definitions:** The following definitions shall apply with regards to these specifications:

**1.4.1 Purchaser:** The end user of the equipment specified or the applicable purchasing Agency.

**1.4.2 Contractor or Manufacturer:** The individual, firm, partnership, manufacturer or corporation to whom the contract is awarded by the Purchaser and who is subject to the terms and conditions within this document. For proposing purposes, the Contractor, Vendor, and proposer are synonymous.

**2.0 QUALITY REQUIREMENTS**

**2.1** The City seeks the highest level of safety, quality assurance and liability protection. To insure that these desires are met the herein referenced portions of NFPA pamphlet 1901, Insurance Service Office Specification latest edition shall apply. Each bidder shall also detail quality control systems and standards that relate to their manufacturing operations. Proposals not meeting this requirement cannot be accepted.

**2.2 Quantities Award:** The Purchaser reserves the right to change the number of vehicles or equipment specified under this contract.

**2.3 Warranty:** The successful Contractor shall provide on company letterhead, a minimum of twelve (12) month warranty on the vehicle which covers defective parts and/or components, the improper choice of materials, parts and/or components, improper design or engineering and poor or improper workmanship or quality control techniques. This warranty shall cover the complete vehicle and shall include any and all costs for labor and parts or materials that are required to correct any and all deficiencies. It is not the intent of this requirement that items such as light bulbs, filters, tires, brake linings, windshield wiper blades, etc. are to be covered. A sample of your warranty shall be submitted with the proposal.

**2.4** Since it is the purpose of these specifications to provide custom fire pumper and Quint aerial fire apparatus that will provide many years of service, the Manufacturer of the vehicle(s) proposal shall warranty the structural integrity, corrosion perforation of the cab and body for a period of at least a minimum of 10 years. This warranty shall be in writing and shall be included with this Proposal.

**2.5** The manufacturer shall provide a minimum 100% parts and labor for five (5) years warranty on the vehicle's engine and transmission.

**2.5.1** The manufacturer shall submit with the Proposal, copies of all warranties described above. These shall be binding on the successful proposer over the service life of the custom fire apparatus. Vehicle proposers who fail to meet this requirement shall not be considered responsive.

**2.5.2** Within one (1) business day after receipt of a verbal or written notification that warranty and/or service contract work is required, the successful proposer shall respond verbally, and immediately follow up by letter to the Purchaser with a statement of intent to show where and when the warranty service shall be accomplished.

**2.5.3** Proposers shall state below the location of the manufacturer's nearest service facility and parts depot to provide service to the City of Fort Lauderdale. Transportation allowance to qualified service center if out of local area.

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone: ( ) \_\_\_\_\_

**2.5.4** Additional warranty or logistical services that the proposer might provide above and beyond the requirements of these specifications may be listed below.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**2.5.5** Warranties shall begin at the acceptance of the vehicle(s) by the Purchaser.

**2.6** Materials and Workmanship. All equipment furnished shall be guaranteed to be new and of current model of manufacture, meet all requirements of this specification, and be in an operable condition at the time of delivery.

**2.6.1** All parts shall be of highest quality workmanship, shall be in production at the time of proposal, and no part or attachment shall be substituted or applied contrary to the manufacturer's recommendations and standard practices.

**2.6.2** All workmanship shall be of highest quality and performed in a professional manner so as to insure a safe and functional apparatus with an aesthetic appearance.

**2.7 Technical Information/Exceptions:** Proposers must furnish all information requested in Part V – Submittal Requirements as well as this Part IV section. Bidders shall provide all necessary information requested by these specifications. Spaces shall be marked throughout Part IV to indicate whether or not the Bidder complies with that paragraph. Any exceptions taken shall be listed in Part IV Section 16.0. The Bidder, when listing exceptions or clarifications, shall reference these specifications by the proper paragraph number. Should the Bidder require additional space for his reply he may attach an additional page(s) into the response at that point. Details concerning the exceptions or clarifications must be clearly explained.

**NOTE:** Bid Proposals failing to meet the requirements of this paragraph may not be considered.

**2.7.1** Bidders shall supply with the bid response at least two (2) complete sets of proposal drawings, descriptive literature and complete detailed specifications covering each type of vehicle offered. The drawings supplied must be at least D size. Drawings shall have left, right, front, rear, and top views. Drawings must represent the vehicles as proposed.

**NOTE:** Bid Proposals failing to meet the requirements of this paragraph may not be considered.

**2.8 Delivery:** Since delivery proposals by the Bidder will weigh heavily in the determination of award of bid, the delivery schedules that are submitted by the Bidder and agreed upon by the Purchaser shall automatically become binding upon the successful Bidder.

**2.9 Patents and Royalties.** The Bidder, without exception, shall indemnify and save harmless the Purchaser and its employees from liability of any kind including cost and expenses for or on account of, any copyrighted, patented or unpatented invention, process or article of manufacture or used in the performance of the contract, including its use by the Purchaser. If the Bidder uses any design, device or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or cost arising from the use of such design, device or materials in any way involved in the work.

## **2.10 – not used**

**2.11 Sub-Contracts:** The City is very desirous of purchasing the fire apparatus(s) from a manufacturer who can provide the necessary support, parts, service and warranty after the sale. As such, the chassis, cab, and body should be manufactured by the bidder eliminating any split warranty responsibility. In any event, the Proposer shall be totally responsible to uphold, honor, service, support, etc. all warranty issues.

**2.11.1** This requirement applies to all major components of the vehicle. Major components include items such as: the Cab and body, interior cabinets, electrical system, all electrical interfaces to major components, paint, and other related items.

**2.11.2** No sub-contractor clause will apply to any type of sub-contract, lease, rental or any other similar arrangement. The Bidder may be required by the City to prove compliance with this requirement. Bidders not complying with this requirement may receive lower scores than one that provide a complete, integrated design and manufactured product.

**2.12 Familiarity with Laws:** The Bidder is presumed to be familiar with all federal, state, and local laws, ordinances, code rules, and regulations that may in any way affect this contract. Ignorance on the part of the Bidder shall in no way relieve him from responsibility.

**2.13 Pre-Construction Conference:** The successful Contractor shall be required, prior to commencement of manufacturing the vehicle(s), to have a Pre-Construction Conference at the manufacturing site with at least four (4) representatives of the City to finalize all the construction details.

There shall also be a mid-construction visit and a last week prior to delivery inspection visit by at least four (4) representatives of the City.

**2.14 Performance Test and Requirements:** The vehicle(s) shall, at the time of delivery, conform to the minimum requirements of the latest standards covering vehicles of this type. This shall include federal, state, and local requirements.

**2.14.1** All vehicles delivered under this Contract shall conform to all Federal Motor Vehicle Standards in effect at the time of delivery.

**2.14.2** A road test will be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more will be made under all driving conditions, during which time the apparatus shall show no loss of power, overheating, failure to shift, or fail pumping test. The transmission, drive shaft, and/ or all other shafts and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. The vehicle shall adhere to the following parameter:

1. The apparatus, when fully equipped and loaded, shall have not less than 25% nor more than 50% of the weight on the front axle, and not less than 50% nor more than 75% on the rear axle.
2. The apparatus must be capable of accelerating to 35 mph from a standing start within 25 seconds on a level highway without exceeding the maximum governed rpm of the engine.
3. The service brakes shall be capable of stopping fully loaded vehicle in 35 feet at 20 mph on level highway. The air brake system shall conform to Federal Motor Vehicle safety Standards (FMVSS) 121.
4. The apparatus, fully loaded, shall be capable of obtaining a speed of 68 mph on a level highway with the engine not exceeding its governed rpm (Fully Loaded).

**2.14.3** In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trial may be made at the option of the bidder within ten (10) Days of the date of the first trials. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes, the purchaser may consider necessary to conform to any clause of the specifications within thirty (30) days after notice is given to the bidder of such changes shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above specified period with the permission of the bidder shall not constitute acceptance.

### **3.0 TECHNICAL REQUIREMENTS - CAB-CHASSIS.**

#### **3.1 General Vehicular Design, Types, and Floor plan:**

The custom fire pumpers and Quint Aerial fire apparatus (The Units) along with the required equipment furnished under this specification shall be the manufacturer's current vehicle of the Type and Class specified. The units shall be complete with the operating accessories as specified herein; furnished with such modifications and attachments as may be necessary and specified to enable the vehicle to function reliably and efficiently in sustained operation. The design of the vehicle and the specified equipment shall permit accessibility for servicing, replacement and adjustment of component parts and accessories with minimum disturbance to other components and systems. The term heavy-duty as used to describe an item, shall mean in excess of the usual quantity, quality, or capacity that is normally supplied with the standard production vehicle or component.

**3.1.1** The vehicle shall be a Class A, and shall be a chassis furnished with a four (4) door custom cab. Chassis shall be suitable for subsequent remounting of a modular (containerized) cab, transferable chassis body conforming to the requirements of this specification.

**3.2 Vehicle Components, Equipment, and Accessories:** The Custom Fire Pumpers and Quint Aerial fire apparatus, chassis, equipment, devices, and electronic equipment to be delivered under this contract shall be produced, tested and certified, to meet or exceed the requirements of this specification. The vehicle shall comply with all Federal Motor Vehicle Safety Standards (FMVSS) and Federal Regulations applicable or specified for the year of manufacture. The chassis, components, and optional items shall be as represented in the manufacturer's current technical data. Also the Pumper body, equipment, and accessories shall be as represented in their respective manufacturer's current technical data. Data shall be limited to specifications and technical materials identical to that furnished to the authorized company representatives by any original equipment manufacturer (OEM).

**3.3 Materials:** Materials used in the construction shall be new and not less than the quality conforming to current engineering and manufacturing practices. Materials shall be free of defects and suitable for the service intended.

**3.4 Vehicle Operation, Performance, and Physical Characteristics:** The following is a description of the Cab-Chassis that will meet the minimum requirements of this specification and it is expressed as minimums.

**3.4.1** The Bidder shall submit certifications at time of delivery that the vehicle type being supplied to the City is in specific compliance with the latest requirements of ISO and NFPA 1901.

**3.5 Custom Chassis:** The Chassis provided shall be a new, tilt type custom fire apparatus. It is desired that both chassis and body shall be manufactured by the bidder eliminating any split warranty responsibilities. The chassis shall be designed and manufactured for heavy duty service, with adequate strength and capacity for the intended load, and the type of service required.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.6 Trim Level:** Trim level shall be "custom" in Silver Gray vinyl. The cab and crew cab flooring shall be covered with rubberized insulated flooring.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.7 G.V.W:** The Gross Vehicle Weight rating shall be a minimum of 49,800 pounds for the custom fire pumpers and 69,500 pounds for the Quint Aerial fire apparatus.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.8 Axles and Suspension:**

**CUSTOM FIRE PUMPERS**

The chassis provided shall have a maximum 225" wheelbase. For safety, ride quality, handling, steer ability, durability, increased spring travel, and reduced maintenance the front axle shall be of the independent suspension design and minimum ground rating of 22,800 pounds for the custom fire pumpers.

The design shall allow the vehicle to travel at highway speeds over improved road surfaces, and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment.

Each wheel shall have torsion bar type spring. In addition, each front wheel end shall also have energy absorbing jounce bumpers to prevent bottoming of the suspension.

The suspension design shall be such that there are at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms.

The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side.

The independent suspension shall be put through a durability test that has simulated a minimum of 140,000 miles of city driving.

Upper and lower control arms shall be used on each side of the axle.

Each control arm shall be mounted to the center section using Eastover bushings. These rubber bushings shall rotate on low friction plain bearings and be lubricated for life. Each bushing shall also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations.

There shall be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension.

The upper control arm shall be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load.

Camber at load shall be zero degrees for optimum tire life.

The kingpin bearing shall be of low friction design and be sealed for life.

Toe links that are adjustable for alignment of the wheel to the center of the chassis shall be provided.

The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle.

The steering linkage shall provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase.

The axle shall have a third party certified turning angle of 45 degrees. Certification must be provided at time of bid.

The rear axle shall be Rockwell RS-26-160, rated at 27,000 lbs. single reduction, capable of maintaining minimum top speed of 65 MPH. Both front and rear axles shall have Chicago rawhide oil seals.

Rear suspension shall be Reyco model 79KB with a ground rating of 27,000 pounds. Spring hangers and mounting components shall be cast. The suspension utilizes two attaching points with variable rate spring cams and rubber bushed adjustable torque arms.

Does your bid comply with this requirement?

YES ( )

NO ( )

## QUINT AERIAL FIRE APPARATUS

The chassis provided shall have a maximum 265" wheelbase. The front axle shall be a reverse "I" beam type with inclined king pins. It shall be a Meritor™ axle, Model FL-943, with a rated capacity of 21,500 pounds.

A sight glass shall be provided on each side of the axle for checking the oil level.

The Meritor™ **three (3) year** parts and labor warranty shall be provided with this axle, plus an additional **two (2) years** of parts only coverage. Meritor™ shall also provide a **one (1) year** parts and labor warranty for wheel seals. Bidders must state warranty coverage on other seals.

The fire apparatus manufacturer shall provide, at time of bid, a letter from an independent third party testing agency stating they approve the steering cramp angle.

Oil seals shall be provided on the front axle. Heavy-duty telescoping shock absorbers (Monroe Magnum 65) shall be provided on the front axle.

The rear axle shall be an Oshkosh Truck Corporation or equal tandem all-wheel steer type with a minimum 48,000 pound gross axle weight rating. Rear suspension to be the Hendrickson RT-503 steel spring system with an equalizing beam design that distributes the load equally between the two axles. Ground rating of the suspension to be 48,000 pounds. There shall be an two (2) eight (8) hour sessions of basic "ALL-STEER(R)" driving techniques provided at vehicle delivery. Instruction shall take place at the customer's location with a maximum of six (6) participants per session. Students shall receive classroom instruction, driver's instruction manual and hands-on driver's instruction.

A rear axle ratio shall be furnished to allow the vehicle to reach a fully loaded top speed of 67 MPH on level road. Oil seals shall be provided on the rear axle.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.9 Frame:** The chassis frame shall be built with steel channels and liners as necessary to meet the performance requirement set herein. It also shall be minimum 100,000 PSI heat treated steel. Total RBM at wheelbase center shall be a minimum of 4,000,000 pound inches per rail and the sectional modulus shall be a minimum of 40.00 cubic inches.

**The Frame rails shall be guaranteed for the life of the vehicle against cracks and failure, excluding accident or abuse.**

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.10 Brakes:** The vehicle shall be equipped with a Wabco 4S4M, anti-lock braking system. The ABS shall provide a four (4) channel anti-lock braking control on both the front and rear wheels. It shall be a digitally controlled system that utilizes microprocessor technology to control the anti-lock braking system. Each wheel shall be monitored by the system. When any particular wheel begins to lockup, a signal shall be sent to the control unit. This control unit then shall reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.10.1** Brakes shall be full air type. Front brakes shall be disc type with a 17.00" ventilated rotor with automatic slack adjusters. Rear brakes shall be Rockwell 16.50" x 7.00" cam operated with automatic slack adjusters. All lining shall be severe duty type.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.10.2** The air compressor shall be a Bendix Tru-Flo 750 with 16.0 cubic feet per minute output. The brake system shall include the following items:

1. Bendix-Westinghouse dual brake treadle valve with vinyl covered foot surface.

2. A heated automatic moisture ejector on air dryer.
3. Total air system capacity of 4,300 cubic inches (min.).
4. Two (2) air pressure gauges with red warning light and audible alarm.
5. MGM spring set parking brake system.
6. Parking brake operated by a Bendix-Westinghouse PP-1 control valve,
7. A parking "brake on" indicator light on instrument panel.
8. Bendix-Westinghouse SR-1 valve, in conjunction with a double check valve system, shall be provided with an automatic spring brake application at 40 psi.
9. Bendix AD9 heated air dryer.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.10.3** An air inlet system, allowing station air to be supplied to the brake system through a shoreline hose, shall be provided. Inlet shall be equipped with a male coupling and be located on the driver's side seat box. A check valve must be provided to prevent reverse flow of air. Inlet shall discharge into the "wet" tank of the brake system. A mating female coupling shall also be provided with the loose equipment. A 12 volt onboard auxiliary air compressor shall be supplied.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.11 Batteries and Alternator System:** The vehicle shall be supplied with six (6) 12 volt, Group 31 batteries with 950 CCA ,185 minutes reserve capacity each, high cycle batteries. All batteries shall be upgraded batteries with a combined minimum cold cranking ampere rating of 5700 CCA at 0 degrees F. A. C.E. Niehoff, model C712-2, alternator shall be provided. It shall have a rated output current of 400 amps as measured by SAE method J56. It shall have a high volume air-cooling fan and fan guard. Also it shall have a custom three (3)-set point voltage regulator, manufactured by C. E. Niehoff. The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

One (1)-12 volt, Delphi group 31 battery shall be provided for voltage sensitive components. A battery isolator that is appropriately suited for the group 31 battery capacity shall be supplied.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12 Engine:** The engine for both types of vehicles shall be a Detroit Diesel engine, Model Series 60 14.0 Liters.

CUSTOM FIRE PUMPERS shall be rated at 435 horsepower at 2100 RPM, 1550 Lbs. ft. torque at 1200 RPM.

QUINT AERIAL FIRE APPARATUS shall be rated at 515 horsepower at 2100 RPM, 1650 Lbs. ft. torque at 1200 RPM.

The compression ratio of both engines shall be 16.0:1 with a governed rpm of 2100. Both engines shall be equipped with a Farr or equal air cleaner, dual fuel filters with check valves, limiting speed type governor and cam operated, unit type clean tip injectors. A lube oil cooler and lube oil filter, full flow shall be provided. The primary fuel filter shall be a Racor spin-on fuel water separator with indicator light. Coolant filter to be spin-on with ¼ turn ball type shut off valves (pre-charged with coolant inhibitor). Air intake shall be supplied with an ember separator.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.1** The fire apparatus manufacturer shall provide, at the time of bid, a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. Since body design and accessories requested in these specifications may affect engine installation certification, the bidder shall also be prepared to submit engine manufacturer's approval of the completed apparatus at time of delivery. The approval of the engine installation must be at full horsepower rating in a continuous duty application under all operating conditions, including road and pump. No type of automatic horsepower reduction feature shall be permitted. **NO EXCEPTIONS.** There will be no exception to any portion of the engine installation certification. Non-conformance will lead to immediate rejection of bid.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.2** The exhaust system shall be approximately a 5.00" inch diameter single system with a chromed tip. The exhaust shall exit on the left side (driver's side) ahead of the rear wheel. A heat deflector shield shall be provided to protect the body and compartments from excessive heat where the tail pipe is routed under the apparatus. In addition, exhaust heat shields shall be provided for the foam pump, foam lines, or any other component below the pump module that may be heat sensitive. The new exhaust system tail pipe must adapt to the current exhaust extractor system (Nederman) utilized in the city fire stations or may be required to include a "No Smoke" diesel exhaust filtration system to be specified by the City of Fort Lauderdale.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.3** There shall be a Jacobs engine brake installed with the controls located on the instrument panel within easy reach of the driver. The driver shall be able to turn the brake system "on or off" and have at least a "high and low" setting. The engine brake is to be installed in such a manner the when the engine brake is slowing the vehicle the brake lights are activated.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.4** A high idle switch shall be provided inside the cab on the instrument panel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.5** The radiator and complete cooling system shall meet the NFPA cooling system standards and the engine manufactures guidelines at maximum load conditions.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.6** All coolant lines shall be silicone hoses with Nalcool radiator additive added to the coolant as a corrosion inhibitor and lubricant, which shall be installed by the chassis manufacturer.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.7** All hose clamps shall be design commonly called "constant torque type" to prevent coolant leaks. The clamp shall react to temperature change in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.12.8** The radiator shall have a sufficient capacity to exceed all cooling requirements specified by the engine manufacturer under all operating conditions. The system shall have a low coolant sight build mounted on the surge tank and an electronic type low coolant indicator mounted on the cab instrument panel. A remote surge and de-aeration tank shall be provided to optimize the cooling system for all operating conditions. The cooling system shall be equipped to maintain a pressure at ten (10) psi for the maximum heat dissipation. The system shall have a drain cock located at the lowest point of the cooling system and extending beyond lowest interfering parts.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.13 Transmission:**

The vehicle shall be supplied with an Allison 4000 EVS P, soft shift 5 speed transmission. The transmission controls shall be a dash mounted touch pad with shift module mounted to right of driver on console. Shift position indicator to be indirectly lit for after dark operations. Transmission shall have four (4) primary speeds and an additional speed (5th) when the mode button is pushed. Shift position indicator shall be indirectly lit for after dark operation.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.13.1** A transmission temperature gauge with red light and buzzer to be installed on cab instrument panel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.13.2** Ratio of transmission to be :

1st.- 3.51 to 1.00

2nd.- 1.91 to 1.00

3rd.- 1.43 to 1.00

4th.- 1.00 to 1.00

5th.- 0.74 to 1.00

REV.- -4.80 to 1.00

An external transmission oil cooler shall be provided.

**BOTH ENGINE AND TRANSMISSION MUST MEET WITH DETROIT DIESEL AND ALLISON TRANSMISSIONS REQUIREMENTS FOR COOLING. NO EXCEPTIONS**

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.13.3** The drivelines shall be made of heavy duty metal tube and be equipped with Spicer 1800 series universal joints. The shafts are to be dynamically balanced before installation. A splined slip joint shall be provided.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.13.4 Diagnostic Software:** The following items shall be included:

1. DDEC software for the specified engine
2. Allison software for the 4000EVS transmission
3. Wabco ABS software
4. J-42660 magikey data translator

(Note) One (1) required for each vehicle configuration.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.14 Fuel Tank:** The vehicle shall be equipped with a seventy five (75) gallon fuel tank mounted at rear of chassis. The tank shall be constructed of 12 gauge, hot rolled steel. The tank shall meet all FHWA 393.67 requirements including a fill capacity of 95% of the tank volume. It is to be equipped with swash partitions and vent. A drain plug shall be provided in a low point of the tank for drainage. A fill inlet shall be located on the driver's side of the body and be covered with a hanged, spring loaded , stainless steel door that is marked "DIESEL FUEL ONLY". A .50" diameter vent shall be provided running from top of tank to just below fuel fill inlet. Fuel tank filler cap must be tethered. Access panel to fuel sending units shall be provided in the rear wall of the rear compartment.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**3.15 Air Conditioning and Heater:** The vehicle shall be equipped with a factory installed heavy duty air conditioning compressor with 134a refrigerant and heavy-duty "down flow" radiator. To increase the BTU capacity and performance of the air-conditioning system, the in dash evaporator in the cab shall be enhanced by a secondary evaporator on the Crew Cab ceiling center. As a minimum the evaporators shall be capable of cooling the cab and crew cab compartment to a maintained 72 degrees Fahrenheit on a 100 degrees Fahrenheit test at 50% humidity within 30 minutes. Actual test results from the manufacturer of the air conditioning system verifying this performance requirement shall be submitted with the bid. A/C system must be the manufacturer's best performing system with removable filters.

A/C vents on the officer's side of the dash shall be constructed of stainless steel or aluminum. Use of plastic materials for the louvers or air deflecting vanes will not be acceptable.

The heater/defroster ventilation shall be built into the design of the cab dash instrument panel. The heater ducts shall be vented in a manner to provide heat directed towards the officer and the driver. The defroster ducts shall be designed to provide maximum defrosting capabilities for the windshield with venting at the lower edges of the windshield. Adjustable defroster louvers shall be provided for directing airflow to the side cab door windows. The heater/defroster shall be provided with cut-off valves located in the engine compartment.

To enhance the performance and reduce noise the cab and crew cab walls shall be insulated with 2.00" insulation where possible and the roof with 1.00" insulation to aid in cooling. The underside of the cab shall also be fully insulated with a blown-on type insulation or approval equal.

The ceiling, side, and rear wall insulation shall be covered with a vinyl liner or a metal panel painted to match the interior.

In addition to the 12V system, a Coleman model 7330B751 15,000 BTU 120V roof mounted air conditioning system shall be provided for operation with the generator. A shoreline connection shall also be provided with auto-eject. A manual transfer switch shall be provided in the cab to transfer the power manually from shoreline to the on-board generator. This is to eliminate the possibility of starting the generator under the load of the A/C system.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**3.16 Glass:** The cab-chassis shall be equipped with the chassis manufacturer's standard tinted glass supplied as part of their Air Conditioning Cooling Package. The glass provided shall meet all the requirements of NFPA 1901 and those of the Federal Motor Vehicle Safety Standards.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**3.16.1 Tinted Glass:** Because of the use of this chassis in the south Florida geographical area, all side windows shall be tinted with a medium after- market 3M brand tint to further reduce the heat in the cab area.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**3.17 Cab Seating:** The cab-chassis shall be equipped with five (5) seating positions. There shall be a Seats Inc. 911 scissor action air ride seat for the driver. The officer front position shall be a Seats Inc. 911 with SCBA provisions. The driver's seat shall incorporate variable lumbar support plus a back angle adjustment, with an adjustable track to allow movement for firefighters of different sizes. The officers seat shall be positioned as far back in the cab as possible to provide the maximum amount of leg / foot room and shall include an adjustable track to allow adjustment to accommodate different size firefighters.

A radio compartment shall be provided under the officer's seat. The approximate inside compartment dimensions shall be 14.88" deep x 13.00" across x 5.25" high. A drop-down door with a locking chrome plated lift and turn latch shall be provided for access.

The compartment shall be constructed of smooth aluminum and painted to match the cab interior. There shall be three (3) forward facing Seats 911 Inc. SCBA seats against the rear crew cab wall facing forward. Seats shall be equally spaced against the rear wall to provide adequate and equal space for all personnel. They shall sit on an aluminum diamond plate pedestal/compartments that will be equipped with front and/or side access doors. Compartment to be sized to hold two (2) containers 11"high x 24" long x 16" wide. Front door to be drop down style or lift off. Chrome plated lift and turn latches with locks shall be supplied. All seats shall be covered in silver gray, embossed vinyl. All seating positions and seat mounts shall be certified and tested to meet current FMVSS. Vinyl insert pads shall be provided for the three (3) SCBA seats.

There shall be stainless steel or aluminum scuff plates along the seat riser where the rear facing seats would normally be. The rear panel of the engine tunnel shall also be overlaid with aluminum or stainless steel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.17.1 Air Bottle Holders:** The crew cab seats in the crew cab and officer's position shall be SCBA type. There shall be mounted in each backrest a Ziamatic model KD-UN-6-SFPHS. SCBA holder with a knock-down bracket and positive holding strap. The bracket shall be adjustable up and down by simply unbolting, relocating and rebolting in desired position. The SCBA cavity in each seat shall be adjustable front to rear in 1.00" inch increments to accommodate different size SCBA bottles. There shall be provided with the Seat Inc. #911 SCBA seats, a backrest inserts which cover the SCBA cavity. The insert covers shall be padded and covered with Tuff Flex material. A total of three (3) inserts covers shall be provided.

Does your bid comply with this requirement?

YES ( )

NO ( )

### 3.18 Resource Console:

#### CUSTOM FIRE PUMPERS

Between the driver and passenger seat, on the engine cover, there shall be provided a center resource console which shall be storage for six (6) five (5") inch binders, for map books, incident reports holders, etc. There shall also be provided overhead consoles with switches as required herein shall be placed in front of the driver and officer's positions. Between the driver and officer in the overhead console, there shall be a 12S flex shaft Intertec or equal map light installed. Radio hard mount bracket on resource console shall be provided.

#### QUINT AERIAL APPARATUS

Will be mounted on the inside cabinet behind the Lieutenants seat for ease of reach. There shall be provided a center resource console which shall be storage for six (6) five (5") inch binders, for map books, incident reports holders, etc. There shall also be provided overhead consoles with switches as required herein shall be placed in front of the driver and officer's positions. Between the driver and officer in the overhead console, there shall be a 12S flex shaft Intertec or equal map light installed. In addition, a Sentralok Knox box will be installed in a location to be determined at pre-construction. Radio hard mount bracket on resource console shall be provided.

Drawings of the overhead or dash console layout showing all switches and controls shall be prepared and approved at the pre-construction meeting by the City.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.19 Instruments and Gauges:** The instrument panel controls and switches shall be identified as to function by imprinted word(s) adjacent to each item. Actuation of the headlights switch shall illuminate (back-lite) wording for after dark operations. Turn signal and high beam headlight indicator lights shall also be provided. Gauges and emergency vehicle switches shall be installed on removable panels for ease of service. The vehicle shall be provided with a complete gauge package with the following instrumentation and gauges as a minimum:

1. Voltmeter with two (2) stage low and high voltage warning indicator lights and audible (showing total voltage).
2. Ammeter (400 amp shunt type)
3. Engine temperature gauge with high temperature audible alarm and (red) warning indicator light.
4. Engine oil Pressure gauge with low-pressure audible alarm and (red) warning indicator light.
5. Fuel Level gauge with two (2) stage low fuel warning indicator light (amber) with audible alarm.
6. Engine hour meter.
7. Transmission oil temperature gauge with audible alarm and (red) warning indicator light.
8. Two (2) air pressure gauges with an individual low air pressure warning indicator lights (red) and audible alarm.
9. Pump Hour meter.
10. Engine tachometer (electric)
11. Speedometer/odometer (electric)
12. Low coolant warning indicator light (amber) and audible alarm.
13. Ignition switch with (green) ignition on indicator light.
14. Push button engine start control switch.
15. Heater and defroster controls.
16. Premium amplitude, frequency, cassette and NOAA weatherband modulation with Two (2) pair ceiling recessed premium speakers.
17. Headlight and self-canceling turn signal switches.
18. Emergency warning light control panel.
19. Parking brake control with (red) parking brake on indicator light.
20. Horn button control in center of steering wheel.
21. Control switch to manually check cab and operator's panel warning indicator.
22. High air restriction warning indicator light (electronic) with an audible alarm.
23. Officer Speedometer, A Class I digital display speedometer shall be provided on the officer's side overhead position.
24. Amber indicator light at the driver's side overhead switch panel that activates whenever the Jacobs engine brake is disengaged.
25. Start / Stop control switch for generator as specified.  
Does your bid comply with this requirement?  
YES ( )  
NO ( )

**3.20 Mirrors:** A Moto Mirror-Plus polished mirror, 7.62" x 13.50" flat glass and a 6.62" x 6.25" convex glass shall be mounted on each side of the front cab doors. Driver and passenger side mirrors shall be adjustable with remote control convenient to the driver.

A 6.00" diameter convex mirror shall be provided over the officer's side front corner of the cab. The mirror shall provide the driver with a view of the front bumper and the area several feet in front of the truck. The mirror housing, tubing, clamps and hardware shall be constructed of corrosion resistant stainless steel.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**3.21 Bumper:** A one (1) piece 10 gauge, 304-2B type polished stainless steel bumper, a minimum 10.00" high shall be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength. The bumper shall be extended approximately 20.00" from front face of cab. A lift and tow package shall be provided. The front bumper and support assembly shall be reinforced to support the lifting and towing of apparatus.

Two (2) Bores, model BG48-10 or equal, lighted sight rods shall be mounted to the outside corners of the front bumper extension. The rods shall be polished stainless steel.

Does your bid comply with this requirement?

YES ( )

NO ( )

CUSTOM FIRE PUMPERS

3.21.1 There shall be a gravelpan, constructed of bright aluminum tread plate, furnished between the bumper and cab face. A hose tray shall be placed in the center of the extended front bumper. This tray shall be capable of carrying 150' of Ponn Conquest 1.75" hose in 50' lengths (to be provided with each truck) in a color to be specified by the City of Fort Lauderdale. The front bumper shall be constructed in three sections with the center section of the bumper hinged at the bottom. Two (2) pawl latches shall hold the section in the closed position. An aluminum lift-up cover shall be provided over the hose tray with a hold open device. Once the center-hinged section of the front bumper is released the lift-up cover may be opened providing quick and easy access to the front jump line. Swivel shall be located in the rear panel of the hose tray.

QUINT AERIAL APPARATUS

3.21.1 There shall be a gravelpan, constructed of bright aluminum tread plate, furnished between the bumper and cab face. A heavy-duty, electric cable winch shall be mounted in the bumper and anchored to the apparatus frame (min 10k lbs.). The front bumper shall be constructed in three sections with the center section of the bumper hinged at the bottom. Two (2) pawl latches shall hold the section in the closed position. An aluminum lift-up cover shall be provided over the tray with a hold open device. Once the center-hinged section of the front bumper is released the lift-up cover may be opened providing quick and easy access to the winch.

Does your bid comply with this requirement?

YES ( )

NO ( )

3.21.2 There shall be two (2) frame mounted chrome tow hooks of adequate capacity to tow the vehicle installed under the bumper.

Does your bid comply with this requirement?

YES ( )

NO ( )

3.22 Tires and Rims: The vehicle shall be equipped with Goodyear or equal radials.

CUSTOM FIRE PUMPERS

22.5, 18ply, G286 tread. The front tires shall be mounted on 22.50" x 12.25" highly polished aluminum disc wheels with a 10-stud 11.25" bolt circle. Rear tires shall be four (4) Goodyear or equal radials 12R22.50, 16-ply highway G159 tread. The tires shall be mounted on 22.50" x 8.25" highly polished aluminum disc wheel with a 10-stud 11.25" bolt circle. Stainless steel lug nut covers and center hub covers shall be installed. Heavy-duty front and rear mud flaps (**NO ADVERTISING**) shall be provided.

QUINT AERIAL APPARATUS

Front tires shall be radials 425/65R22.50, 20 ply "all position" tread. The tires shall be mounted on 22.50" x 12.25" highly polished aluminum disc-type wheels with a ten (10) stud, 11.25" bolt circle. Rear tires shall be four (4) super single radials 445/65R22.5, 20ply "all position" tread. The tires shall be mounted on 22.50" x 13.00" steel disc-type wheels with a ten (10) stud-11.25" bolt circle. Heavy-duty front and rear mud flaps (**NO ADVERTISING**) shall be provided. Stainless steel wheel covers shall be provided for the front and rear wheels.

Does your bid comply with this requirement?

YES ( )

NO ( )

**3.23.** The O.E.M. manufacturer's dual electric horns shall be provided. In addition to these horns there shall be provided two (2) air horns compliant with section 4.7.

Additionally, on the CUSTOM FIRE PUMPERS, there shall be a Bendix BA921 with 15.8 CFM type air compressor. Minimum four (4) steel air reservoir with check valve shall be supplied.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**3.24 Windshield Wipers:** Dual electric wipers with washer and intermittent feature shall be provided to meet FMVSS and SAE requirements. One (1) control shall operate both wipers. The control shall also have a "return to park" feature provision. The wipers shall have a pantographic design for covering a large sweeping area. A 2.5-gallon windshield washer reservoir shall be included.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**3.25 Steering Wheel:** The chassis manufacturer's heavy-duty tilt and telescoping steering wheel column shall be provided. Power steering shall be a Ross or an approved equivalent. Steering wheel shall be a minimum of 18 inches. The power steering shall incorporate a Vickers V20NF hydraulic pump or equal with integral pressure and flow control.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**3.26 Cab Features and Equipment:** There shall be O.E.M. installed left and right hand grab rails. The cab shall be a full tilt design, allowing easy maintenance of the engine compartment. The cab doors shall be keyed the same. Six (6) sets of keys are required for each vehicle. There shall be dual dark tinted Plexiglas sun visors.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**3.27 Turning Circle:** The proposer shall supply with the bid proposal a turning performance diagram showing the inside turning radius, curb-to-curb radius and the wall-to-wall radius. Wall-to-Wall radius shall not exceed thirty-eight (38) feet and curb to curb turning radius shall not exceed (33) feet. This shall be the minimum radius for turns in both directions.

These dimensions shall be shown in feet and are to be for the chassis wheelbase proposed in the bid. Bids not meeting this requirement cannot be accepted. Unit shall be tested for compliance at time of final acceptance.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**3.28 Handheld Spotlight:** The proposer shall supply a Collins CL12 or equal handheld spotlight with stainless steel slide-in mounting bracket/pocket. Mounting location to be determined at time of pick-up.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

## 4.0 ELECTRICAL SYSTEM AND COMPONENTS.

**4.1 Electrical System:** The vehicle's electrical system shall be equipped with, but not limited to the following: six (6) 12 volt, Group 31 batteries, generating, starting, lighting, ignition, visual and audible warning systems, specified electronics equipment and devices including master consoles located in the cab and crew compartment and other specified accessory wiring. Distribution panel in the cab shall have a hinged cover for ease of access.

The electrical systems and equipment shall comply with all applicable FMVSS, including Federal Motor Carrier Safety Regulations (FMCSR) and shall also conform to all the applicable SAE recommended standards and practices, whether or not specifically referenced in this document while complying with the sub-paragraphs herein. All electrical and electronic components shall be selected to minimize electrical loads. All electrical system components and wiring shall be readily accessible through access panels for checking and maintenance. All switches, indicators and controls shall be located and installed in a manner that facilitates easy removal and servicing. All exterior housings of lamps, electronic devices, and fixtures shall be corrosion resistant and weatherproofed.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.1.1** A compartment shall be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment shall contain circuit protection devices, power control devices, and a programmable logic controller. Power and signal protection and control components shall be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.

Serviceable components shall be readily accessible.

Circuit protection devices, which conform to SAE standard, shall be utilized to protect each circuit. All circuit protection devices shall be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers shall be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. PTO power circuits shall be protected by Type III manual reset non-cycling circuit breakers conforming to SAE J553 or J258, which remain open until manually reset. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 shall be utilized to protect electronic equipment.

Power control relays and solenoids shall have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.

A microprocessor based programmable logic controller shall be utilized to control safety interlocks and vehicle system status indicators. In addition to visual status indicators, the logic controller shall activate audible alarms designed to provide early warning of problems before they become critical. The programmable logic controller shall include the following attributes:

- On-board self-diagnostic input status indicators
- Automatic self-test on startup with provision for manual activation
- Eliminate control logic relays wherever possible
- Provide logic control for NFPA 1901 mandated safety interlocks and indicators
- Utilize system integration to eliminate redundant wiring and components
- Improve control system reliability by reducing relay and connector contacts
- Optically isolated inputs to eliminate transient electrical interference
- Customized control software programmed to reflect the vehicles unique configuration

- Field re-programmable to accommodate changes to the vehicles operating parameters
- Fully documented hardware and software (including licensing)
- Complete operating and troubleshooting manual

On-board diagnostics indicators shall be provided to support rapid troubleshooting of the electrical power and signal system. The diagnostic indicators shall be located in a readily accessible area. A complete troubleshooting guide shall be provided with the vehicle to assist with interpretation of the diagnostic signals.

A system shall be provided which shall automatically test indicator lights and alarms located on the cab instrument panel when the ignition switch is activated. Provisions shall be provided to allow a manual retest when the ignition switch is "on" and before the parking brake is released or the split-shaft PTO is engaged.

A voltage monitor system shall be provided to indicate the status of each battery system connected to the vehicles electrical load. The monitor system shall provide visual and audio warning when the system voltage is above or below optimum levels.

Two (2) alarms stages shall be provided. The first stage shall activate intermittently if the system falls below 11.8 vdc or rises above 15 vdc. The second stage alarm shall activate continuously if the system voltage falls below 11.3 vdc or rises above 16 vdc. Input voltages shall be conditioned to avoid nuisance alarms.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.1.2** The Bidder shall submit with the bid response a complete electrical load analysis worksheet. This is required so that the City can determine if the vehicle's electrical system is overloaded. The Bidder shall point out if the system is over loaded and suggest correction methods. Bids not meeting this requirement cannot be accepted. **NO EXCEPTIONS.**

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.1.3** The cab compartment control consoles shall be constructed in a way that the switches and gauges are easily serviced. They shall be accessible through service panels. These panels will be secured in the closed position in a positive manner and yet can be easily opened for service using common tools. The control console's gauges shall be internally illuminated.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.1.4** The cab compartment controls shall incorporate heavy duty rocker switches. These switches shall be internally lighted to indicate when they have been activated. The legend shall be the descriptive functions of the switch incorporating a two stage back lighting LED system. Low intensity to be controlled by the vehicle headlight switch rheostat. High intensity to be controlled by switch activation. The switch legend shall only be lighted when the systems master control switch is activated.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.1.5** All exterior housings of lamps, electric devices and fixtures shall be corrosion resistant and weather proofed. Electrical fixtures attached to the sides of the vehicle below the 75 inch level shall be near flush mounted, not to protrude more than two (2) inches, except for such items as ground lights and speakers.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.1.6 Spare Circuits.** There shall be seven (7) pair of wires installed.

The above wires shall have the following features:

- Wires shall be connected directly to the battery power.
- Wires are fused at 15 amps.
- Power and ground will end in the cab and crew cab, with final locations to be determined.
- Termination is with heat shrinkable butt splicing.
- Wires shall be sized to 125% of the maximum amperage rating of the circuit.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**4.1.7** All electronic devices and equipment installed which produce RFI, shall have the proper filters, suppressors or shielding to prevent electromagnetic radiation and the resultant interference to radios and other electronics. These suppression devices shall meet the requirements of NFPA 1901, paragraph 9-7.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**4.2 Warning Indicators:**

The electrical system shall incorporate One (1) Whelan 800C, red warning light mounted in the ceiling in the line of sight of both driver and passengers with dash mounted buzzer incorporated in the door open circuit to be activated when the vehicle's battery switch is in the on position indicating any door or compartment are open or ajar. This light shall meet the requirements of both NFPA 1901 and department.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**4.2.1** A battery selector indicator light shall be provided. It shall be a GREEN light meeting the above description. When the vehicle battery switch is in the ON position this light shall indicate that the batteries have been selected.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**4.3 Wiring Installation:**

All wiring provided by the apparatus manufacturer shall be copper and conform to all the SAE J1292 requirements and shall have type GXL cross linked high temperature polyethylene or better insulation rated to 300 degrees Fahrenheit and conforming to SAE J1127 and J1128. Documentation from the apparatus manufacturer that they are in compliance with this requirement shall be submitted with the Bidder's proposal. Bids not meeting this requirement cannot be accepted.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**4.3.1** The wiring shall be permanently color coded, or numbered, or function coded, to identify wire function. Wires shall be permanently heat ink embossed with both number and function codes. The function code shall be the descriptive name of the circuit served. The number code shall be the exact purpose of that circuit. This number code shall be completely referenced in a detailed wiring schematic provided with the vehicle. The function and number code shall be embossed at a minimum of 4-inch intervals the entire length of the wire.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**SPECIAL NOTICE TO BIDDERS:**

Wiring code numbers that are paper or plastic that are glued or otherwise attached to the wire shall not be considered permanent and will not be accepted.

**4.3.2** The use of Scotch-Lock type fasteners are NOT ACCEPTABLE. To insure minimal voltage drop and secure connections NO splices shall be allowed in the primary wiring harness.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.3.3** The successful bidder shall deliver with the **finished** vehicle, two (2) complete set of "as built" electrical diagrams. Should the vehicle not have these drawings at delivery it will be rejected until the drawings are provided. Bidders shall submit with their bid package a sample set of the wiring schematics that would be provided with the finished vehicle. Bids not meeting this requirement shall not be accepted. **NO EXCEPTION.**

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.4.1** A service loop of wire or harness shall be provided at all electrical components, terminals, and connection points. All low power relays shall be mounted for ease of serviceability. All high current diodes shall be heat sink mounted. Three (3) spare 15-ampere circuit breakers shall be provided for future use. A solid state electronic flasher shall be heat sink mounted to the panel for control of the flashing warning light system. All wiring between the cab and body shall be connected to a terminal strip(s) or circuit boards. All connections and terminals provided shall comply with SAE J163, J561 or J928 as applicable.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.5 Ignition System:** Shall be as per NFPA 1901.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.6 Windshield Wipers and Washers:** Shall be as specified. under paragraph 3.24 and those requirements of NFPA 1901.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.7 Horns:** This vehicle shall have the chassis manufacturer's dual electric horns furnished and (2) Grover stutter tone chrome round 24" air horns located horizontally in the front bumper ,recessed one each side of the frame extension. They shall be plumbed to the air brake system wet tank utilizing .38 tubing. A pressure protection valve shall be installed in-line to prevent loss of air in the air brake system. There shall be (2) clamshell master S-491 switches installed, one on the drivers side and one on the passengers side of the cab floor. The air horn switch shall be inoperative with the parking brake engaged.

An additional air tank with 1450 minimum cubic inch displacement shall be provided to increase the capacity of the air system. This tank shall be dedicated for air horn use only.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.8 Electrical System:** The apparatus shall be equipped with a 400 ampere alternator with external voltage regulator and for the CUSTOM FIRE PUMPERS adequate diode set.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**4.9 Engine High-Idle Speed Control, Automatic:** The vehicle shall be equipped with a High-Idle Speed Control switch. It shall be preset so that, when activated, it will operate at the engine manufacturers appropriate RPM. This device shall operate only when the master high idle switch is in the ON position and the transmission is in NEUTRAL. The device shall disengage when the operator releases the brake, or the transmission is placed in gear.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**4.10 Ammeter:** The electrical system, shall incorporate a center scale ammeter that is capable of indicating a current of 400 amperes to or from (charging or discharging) the six pack of batteries. The ammeter shall incorporate an external shunt that does not exceed a drop of 400 millivolts at maximum current. The ammeter and shunt shall have a combined accuracy of approximately 10 percent of the full scale reading. The ammeter shall be located in the driver's control console. The shunt shall be protected against physical damage, weather and road spray and shall be mounted in an easily accessible location that shall minimize the length of the power cables.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**4.11 Voltmeter or Voltage Monitor:** The vehicle shall be equipped with a voltmeter to monitor system voltage. The voltmeter connection shall be direct to eliminate erroneous readings from connection voltage drops. This voltmeter will be mounted in the driver's control console next to the ammeter. It shall be backlighted with its brightness controlled by the headlight rheostat. The voltmeter shall match the ammeter in both style and readout. The monitor system shall provide visual and audio warning when the system voltage is above or below optimum levels.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**4.11.1 Load Management System:** A Kussmaul, or Class One electronic load management system shall be provided which monitors the vehicle 12 volt electrical system and automatically reduces the electrical load in the event of a low voltage condition. The load manager shall monitor the vehicle's condition while at the scene while the parking brake is applied. It shall sequentially shut down individual electric loads when the system voltage drops below a preset value. Seven separate electrical loads are to be controlled by the load manager.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**4.12 NOT USED**

**4.13 Battery Charger or Conditioner:** A Kussmaul Pump Plus 1200 single output battery charger/air compressor system shall be provided. A display bar graph indicating the state of charge shall be mounted on the driver's side seat riser.

The automatic charger shall be capable of delivering one (1) set of batteries a maximum charging current of 40 amps.

The 12-volt air compressor shall be installed to maintain the air system pressure when the vehicle is not in use. A selector switch shall be provided on the charger to operate the air compressor either as a DC compressor or as an AC compressor. If the selector switch is in the DC position the compressor shall operate whenever the pressure switch senses low system pressure, however if in the AC position the shoreline inlet must be plugged in before compressor shall operate.

The battery charger/compressor shall be wired to the 120-volt shoreline to activate automatically when power is connected.

Battery charger shall be located behind the driver's side seat. A stainless steel cover shall be provided over the battery charger and wiring.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.14 Shore Power with Auto Transfer:** To permit operation of the 110V without the use of the generator system, a 20 amp shore-power shall be provided. To protect either the generator or external power source from back-feed a relay shall be installed to automatically cut-off the external power source.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.14.1 A/C Receptacles:** Wired to the power supply shall be three (3) receptacles that are a 120 volt 20 amp three wire twist-lock NEMA L5-20 type with weather resisting cover located one each side of extended front bumper and one inside compartment D front wall, 12" centered off the floor.

Wired to the power supply shall be two (2) receptacles that are 220-volt, 30 amp, three (3)-wire twist-lock NEMA L6-30 type with a weather resisting cover located BOTH in the compartment "E" below the hydraulic reels.

One (1) receptacle shall be a NEMA 5-20, 120 volt, 20 amp, three (3) wire duplex household type with a weather resistant cover connected to the generator. Locate in left rear side compartment.

One (1) receptacle shall be a NEMA 5-20, 120 volt, 20 amp, three (3) wire duplex household type with a weather resistant cover connector to the shoreline. Locate in right front side compartment wall 8.00" from the ceiling and 6.00" off the rear wall. RECEPTACLE WILL BE CONNECTED TO THE SHORELINE .

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.15 115 Volt AC Utility Power:** The vehicle shall be furnished with a 3-wire including ground 115 volt AC wiring system that is separate and distinct from the vehicle's 12 volt DC wiring system(s). The 115 volt AC electrical system, including wiring and associated equipment, shall comply with Article 551 of the National Electrical Code. This system is to be used while the vehicle is on standby for powering maintenance devices, medical equipment battery chargers, and any other device(s) deemed necessary by the City. Receptacle location to be determined during pre-construction meeting.

The 115 volt system shall incorporate a ground fault interrupter (GFI) device and a 30 ampere circuit breaker which can be used as a MASTER 115 volt disconnect switch. The GFI and circuit breaker may be an integral unit. All of 115v AC electrical system components are to be listed by a nationally recognized testing laboratory, and are to be recognized by OSHA under Appendix A to 29 CFR 1910.7.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.16 Utility Power Connector:** A shoreline shall be provided in compliance with Article 551 of the National Electrical Code. The shoreline connector shall be a 20 amp inlet to feed all 115v. A Kussmaul Auto Ejector shall be installed for the battery charger, one(1) receptacle shall be provided. The one(1) receptacle shall be the Kussmaul Auto-Eject 20 WP and shall be installed at a location to be determined at the pre-construction conference. the Auto-eject shall be connected to the vehicle start buttons so when the engine is started the auto-eject drives the shoreline connection from the inlet. The electrical inlet shall include a spring loaded cover to prevent water from entering the receptacle when the shoreline is not connected. The electrical receptacle shall be a 120 volt, 20 amp (NEMA 5-20P) and shall be wired to the battery charger with no less then 12 gauge wire that is properly supported and shielded from injury. The Auto-eject shall be connected to the battery charger and shore-power for the 110 Volt air conditioning system.

Does your bid comply with this requirement?

YES ( )

NO ( )

**4.17 Generator System: GENERATOR**

**CUSTOM FIRE PUMPERS**

Model: Westerbeke 10.0 kW, Model BT DAR diesel powered generator with XRT – Combi Hydraulic Power unit to accommodate two (2) TNT high pressure Hydraulic Rescue Tools. (Model #44677200)

Generator shall be remotely controlled by a Gen-Set remote start /stop panel to be include in the cab instrument panel. (Model # 44336)

Mounting: Permanent

Size: 37.70" length x 20.00" width x 28.10" height. Add approximately 12.00" to the overall length of the generator for the hydraulic tool system.

Weight: 560 pounds

**QUINT AERIAL APPARATUS**

Model: Westerbeke 10.0 kW, Model 44677000 (10BT DAR) mounted similar to custom pumper as space allows. Final location to be made at pre-construction meeting.

**Fuel Requirements**

The fuel supply shall be the chassis fuel tank.

**Exhaust**

The muffler shall be mounted outside the generator compartment and shall discharge on the left side forward of the rear wheels.

**Type of Cooling System**

The generator shall be liquid cooled and equipped with a pusher fan. The radiator shall be isolated so that the hot air does not recirculate back into the compartment.

**Cooling Requirements**

The air outlet requirements shall not be less than 194 square inches. The fresh air inlet shall not be less than 240 square inches.

Shutdown: Low oil pressure and/or high engine temperature.

Continuous Duty Rating: 10,000 Watts (7,000 Watts while XRT system is running)

Volts: 120/240

Phase: Single

Amperage: 83.0 amp's @ 120 VAC  
42.0 amp's @ 240 VAC

Cycles: 60 HZ

### Generator Instruments and Controls

To properly monitor the generator performance a meter panel shall be furnished and mounted next to the circuit breaker panel. The unit shall be a single phase, three (3)-wire, 120/240-volt series. The following instruments shall be installed in the panel if not specified on the generator:

- One (1) Voltmeter
- Two (2) Ammeters
- One (1) Frequency Meter
- One (1) Hour Meter on the Generator
- One (1) "Power On" Green Indicator Light
- Two (2) Fuse Holders with Two (2) Amp Fuses (for gauge protection)

The gauges and controls shall be installed near eye level in the compartment. Instruments shall be flush mounted in an appropriate sized weatherproof electrical enclosure. All instruments used shall be accurate within +/- Two (2) percent. The load center shall have a circuit breaker to assure overload protection. The breaker furnished shall be properly sized to the generator output.

### Operating Criteria

If the generator is located in a cargo area, the radiator shall be facing the side sheet for the air to escape.

A Westerbeke hydraulic tool pump shall be installed on the generator. The pump shall be direct coupled to an output shaft on the Westerbeke generator and be operational anytime the generator is running.

A three (3) gallon fluid supply tank with sight gauge shall be provided. A temperature gauge shall be installed on the tank.

Output of the pump shall be adjustable up to 10,500 psi. The pump shall have the capability to operate two (2) tools simultaneously. The hydraulic pump shall be connected to the two (2) rear mounted hydraulic reels. Control valves for the hydraulic system shall be located in the rear compartment with the hose reels in a specified location. Knobs shall be color coded to match the hydraulic hoses (red and black).

Tools shall be TNT brand or equal with final details and model numbers to be provided by the Fire Department.

The generator shall be permanently mounted in a recessed open compartment above the fire pump towards the passenger side. The oil drain, oil dipstick, fuel filter and oil filter for the generator shall be easily accessible for maintenance. Removable panels and an extended oil drain shall possibly be necessary to meet this requirement.

Electric start provisions shall be furnished for the generator from the chassis battery system. Starting provisions shall be furnished for the generator from the cab console.

A fuel pick-up tube shall be provided in the chassis fuel tank along with an electric fuel pump for the generator fuel system. A fuel line shall be provided from the fuel tank to the generator with a manual shutoff valve located at the generator.

The generator oil drain shall extend through the floor exiting below the truck.

The generator shall be totally enclosed with a cover constructed of .125" bright aluminum tread plate. The cover shall be provided with adequate ventilation to allow generator operation while closed and have any necessary access doors for maintenance.

Removable panels for service and protection from the elements are to be provided. Starting provisions shall be furnished for the generator from the cab console.

A special compartment shall be installed forward of the generator. The compartment shall consist of a stainless steel door above the right side pump panel for access and an offset divider. The opening is to be made as large as possible. The divider is to be made of aluminum and shall run the full width of the cargo area. The divider shall run as close to the generator as possible and jog around the foam system hydraulic reservoir. This area shall be used for storage of long tools.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**4.18.1 Circuit Breaker Panel:** A circuit breaker panel shall be installed in the left front forward compartment located at the top of compartment. A directory for each breaker shall be provided adjacent to the circuit breaker panel. Identification of circuits shall be done by proper labeling with a durable material.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**4.19 Instrument Console:** In front of the driver and officer's seat there shall be provided a overhead control console. It shall be constructed to match the lines, contours and color of the cab interior. The console shall be easily accessible via a full-length stainless steel hinge for service and maintenance. It shall not interfere with any function. The "master" disconnect switch shall be supplied with a handle or knob which feels different to the touch that the other switches, or be physically isolated from them.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**4.20 Electromagnetic Radiation and Suppression:** Electrical components, electronic equipment and devices - used and installed on the apparatus, in addition to all sub-systems (chassis, warning systems, etc.), shall be electromagnetic radiation suppressed, filtered, or shielded to prevent interference to radios and other equipment aboard the vehicle and surrounding area. The RFI of the completed apparatus shall not exceed the maximum limits - of SAE J551.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**5.0 VEHICLE LIGHTING REQUIREMENTS.**

**5.1 Vehicle Exterior Lighting:** The basic exterior vehicle lighting shall comply to FMVSS Standard No.108 and the current NFPA 1901 Standards, amp draw requirements herein include: amber front and rear directional signals and hazard warning lights, front, rear and side marker lights, backup light(s), clearance lamps, emergency warning lights, floodlights, scene lights, and spotlight(s).

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**5.1.1** The vehicle's brake/tail lights ,turn signals and reverse lights shall be Whelen LED in a cast aluminum bezel. They shall be set up as brake / tail-red, turn arrow/hazards-amber and reverse/-clear. All exterior clearance lights shall be LED where possible.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**5.1.2** There shall be a Truck Lite # 40803 with "WIDE TURN" lettering on the lens installed on each side the rear of the of the body in addition to the LED turn signal light. This light is approximately 12" wide x 7" high. It shall be illuminated and flash when the right directional is activated/used.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.2 Vehicle Emergency Lighting Systems:** The emergency lighting system must provide the vehicle with 360 degrees of visual warning conspicuity as required in NFPA 1901.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.2.1** These lights shall function in a dual mode system as required by NFPA All warning lights furnished shall be mounted to project their highest effective intensity beams on the horizontal axis.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.2.2** To meet the above requirements the apparatus shall be equipped with the following lights in the specified locations:

1. Two (2) pair of Whelen, Model: 60R00FRR red LED lights shall be installed on the cab face, above the headlights, mounted in a common bezel. Two each side of engine grill.

Both sets of lights shall be activated by the same switch in the cab.

2. Two (2) Whelen, Model 901000\*U, strobe lights shall be located at the rear of the apparatus required to meet the lower level optical warning and optical power requirements of NFPA.

The color of these lights shall be red.

3. There shall be a combination of the following Whelen strobe and LED lights provided on the apparatus:

Two (2) Model: 901000\*\*, strobe lights. The location of these lights shall be one each side on the bumper extension. The color of these lights shall be red.

Two (2) Model: 602000\*\*, strobe lights. The location of these lights shall be above the rear wheels each side. The color of these lights shall be red.

Two (2) Model: 60R00FRR red LED lights. The location of these lights shall be each side aft of crew cab doors. The color of these lights shall be red.

The lights shall be controlled by a lighted switch on the cab instrument panel.

There shall be a Whelen, Model UPS-64LX, power supply provided to control the flash pattern of these lights.

4. Two (2) Whelen, Model B6RS\*\*1P, combination halogen/strobe warning lights shall be provided at the rear of the truck, located one (1) on each side. The lights shall each contain a RB6 rotating beacon and a 7E series linear strobe light mounted in a polished aluminum housing. The beacons shall be provided with both domes red lenses and the strobe lights shall be provided with amber lenses.

The rotating beacon shall be activated by a switch on the cab instrument panel. The strobe lights shall be activated whenever the parking brake is set and the switch is "on".

## 5. LIGHT BARS

### CUSTOM FIRE PUMPERS

A Whelen 9308NFSQ light bar shall be mounted on the cab roof. The length of the light bar shall be 72.00". The light bar shall include two (2) duplex linear strobe tubes, six (6) large linear strobes and one (1) Pierce Alert (PR20SCCC) light. The light bar shall be configured with a combination of red, clear lenses.

### QUINT AERIAL APPARATUS

Two (2) Whelen 9MMEDGFFD light bar shall be mounted on the cab roof each side of the aerial ladder facing forward. The length of each light bar shall be 28.50". Each light bar shall contain four (4) strobes.

One (1) lighted switch in the instrument panel shall activate all the lights. The Pierce Alert shall be disabled when the parking brake is set to meet the NFPA requirements.

6. Two (2) Whelen, Model: 9MMEDGFFD, light bars shall be mounted on the cab side roofs above the crew cab doors, one (1) on each side. The length of the light bars shall be 28.50" long. Each light bar shall include four (4) outward facing strobe warning lights.

The light bar shall be furnished with red lenses.

7. The high beam headlights shall flash alternately between the left and right side with a control switch located on the cab instrument panel. Alternating function shall be controlled by a solid state electronic flashing module. Lights to automatically cancel upon switching headlights to high beam.

8. A Whelen, Model TA652L, six (6) light L.E.D. array shall be recessed and mounted on the rear of the vehicle, between the rear compartment and the hose bed area on the CUSTOM FIRE PUMPERS and above the rear ladder storage compartment below the aerial turntable on the QUINT AERIAL APPARATUS. A control head shall be used to actuate the light. This control head shall be located in the cab and be easily accessible to the driver. The control unit shall simulate the action of the light at the rear of the vehicle.

Does your bid comply with this requirement?

YES ( )

NO ( )

### 5.3 NOT USED

**5.4 Hardware, Construction, Switching Arrangements:** The emergency lighting system shall be comprised of components and devices that comply to the general requirements and tests of SAE J575g, J576d and J55l. Warning lights shall be firmly fastened to reinforced body surfaces. All switches, connectors, and wiring shall be rated to carry a minimum of 125% of their maximum ampere load.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.4.1** All emergency light switches shall be labeled as specified in paragraph 4.1.4 of this specification. The ON SCENE/RESPONDING mode switch(s) shall have an indicator light(s) to show the driver which mode is activated. All warning light control switches shall be located in the driver's overhead control console. The emergency light switches shall be wired and arranged to provide the warning light signal modes and combinations as specified by the department.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.5 Tests Warning Light System:** Certification to be provided to confirm that the vehicle's warning light system complies with the requirements of these specifications, NFPA 1901 and those specified by Fort Lauderdale Fire Rescue Department. These certifications do not need to be supplied with the bid response but shall be provided to the Purchaser prior to final acceptance of the vehicle.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.6 12V Flood and Scene Lights (Exterior):** Flood and scene lights shall be not less than 75 inches above the ground and unobstructed by equipment. Floodlights shall be located on the left and right sides of the apparatus, and be firmly fastened to the reinforced body surfaces. The lamp(s) H-V shall be projected downward at an angle of 13 degrees on the sides and 26 degrees at the rear from the horizontal plane. This shall be accomplished by using a highly polished stainless steel housing.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.6.1** The lighting on each side of the apparatus shall consist of three(3) Whelen Engineering series 97H halogen lights with a 13 degree internal optical lens with highly polished stainless steel flange (total of 6). Three(3) floodlights shall be installed on each side of the apparatus. One(1) on the cab between the doors at the roof line and two(2) on the hose bed, front and rear. These lights shall be projected downward at an angle of 13 degrees. Floodlight switches shall be located in the cab overhead console, and control each set of side scene lights independently.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.6.2** There shall be two (2) Whelen series 97H lights with a 26 degree internal optical lens with a highly polished stainless steel flange. Rear loading/scene light(s) shall be activated by a switch located in the cab in the overhead console next to the above lighting switches.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.7 Perimeter Scene Lighting:** Four(4) 4.00" diameter white perimeter scene lights shall be provided on each side of the apparatus. One(1) shall be installed below the front bumper, one(1) shall be installed at the rear of the apparatus, and two(2) below the running board. (Total of 8)

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.8 Cab Interior Lighting:** The basic interior apparatus lighting configuration shall be designed to include: a driver and officer compartment dome light, a driver and officer compartment individually switched (red) dome light, instrument panel lights, master switch panel and console light(s). Two (2) adjustable map lights with switches mounted on the cab ceiling. Two (2) courtesy lights at each door opening, controlled by automatic door switches. Lighting shall be designed and located so that no glare is reflected into the driver's eyes or his line of vision from the switch control panels or other areas that are illuminated while the vehicle is in motion. The cab compartment dome lighting shall be sufficient at the step wells, and all control panel shall be clearly visible or separately illuminated.

Does your bid comply with this requirement?

YES ( )

NO ( )

**5.9 Crew Cab Compartment Illumination:** The crew cab compartment shall be provided with two (2) clear dome lights installed centered between the three (3) rear seats, two(2) individually switched (red) dome lights installed centered between the three (3) rear seats. The two (2) front clear dome lights and the two (2) rear clear dome lights shall be controlled by automatic door switches. Two (2) courtesy lights per step at each door opening shall be provided and controlled by automatic door switches.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**5.9.1 Step Lights:** Four( 4) step lights shall be provided. One (1) step light on each side shall be provided on the front compartment face. Two (2) step lights at rear, will illuminate the tailboard. These step lights shall be actuated by the pump panel light switch.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**5.9.2 Compartment Lighting:** A minimum of two (2) 6.00" inch diameter lights shall be provided in each enclosed compartment. The lights shall be placed so that they illuminate the complete compartment with equipment. The lights shall be controlled automatically by opening and closing the compartment door. Each compartment light shall also include an on/off switch for individual isolating control. All compartment switches provided shall be the magnetic type. Plunger type switches will not be acceptable by this Agency.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**5.9.3 Pump Compartment Lights:** A pump compartment light shall be provided inside the right side pump enclosure and accessible through a door on the pump panel. A .125" weep hole shall be provided in each light lens, preventing moisture retention.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**5.9.4 Open Door Alarm and Indicator:** A open door warning indicator and alarm system shall be provided with two (2) red indicator lights located in clear view of the driver, warning of an open cab or compartment door. One (1) light shall indicate status of door on the driver's side and the other light shall indicate the status of the passenger's side and rear compartment doors. In addition to this system, there shall be provided one (1) Whelen Engineering 800C, red warning light mounted in the ceiling in the line of sight of both driver and passengers with an audible alarm that is activated any time a cab or compartment door is ajar and the parking brake is released. This system shall also be provided for the hydraulic ladder rack in the event it is not properly secured upon release of the parking brake.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**5.9.5 Telescoping Lights:** Two (2) Fire Research 1000 watt, 240 Volt Focus quartz lights on pull-up telescopic poles shall be installed. One(1) quartz light shall be installed each side of the top mount operator's position for the CUSTOM FIRE PUMPER. Lights shall be mounted at the rear of the pump housing area in a location to be determined at pre-construction for the QUINT AERIAL APPARATUS. Lights shall be controlled through switches located at the top mount control panel and inside the cab. Each telescopic light shall be equipped with a micro-switch or magnetic switch that will activate the "DO NOT MOVE APPARATUS" light in the cab whenever the lights are not in the resting/stored position. These lights shall be switched from the pump operator's panel and from inside the cab.

Switches for these lights shall be on/off actuation switch, with a 12VDC, green indicator light, shall be provided to actuate a 120/240-volt solenoid switch for each quartz light.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**5.9.6 Electric Cord Reels:** One (1) Hanney 1600 series electric cord reel four (4) wire shall be provided. Reel shall be mounted from the ceiling of the right rear side compartment on the CUSTOM FIRE PUMPERS. Reels shall be mounted in compartment locations to be determined at pre construction for the QUINT AERIAL APPARATUS. A Nylatron guide shall be provided to help loading and unloading the cord from the reel. 200 feet of 10/4 wire shall be provided on the reel. A ball stop shall be provided to prevent the cord from being completely rewound onto the reel. The reel shall be equipped with a Woodhead junction box with two (2) 120V 20 amp straight blade outlets and two (2) 120V 20 amp twist lock outlets. . An indicator light shall be provided on the junction box. The junction box shall be attached to the end of the cord with a quick disconnect twist lock connector. A stainless steel mounting bracket shall be constructed and supplied for the junction box.

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.0 CAB BODY DRIVER COMPARTMENT AND EQUIPMENT.**

**6.1 Cab-Body Structure:** A fully enclosed driving compartment designed specifically for the fire service shall be provided. **NO EXCEPTIONS** The construction of the cab shall consist of high strength 5052 aluminum welded to extruded aluminum framing. Material thickness shall be a minimum of .125". The bidder shall provide a ten (10) year cab warranty, which shall cover structural failure caused by defective design or workmanship. A copy of the warranty shall be submitted with the bid. **NO EXCEPTIONS**

All cab interior and exterior surfaces shall be free of all sharp projections. Exposed edges and corners shall be broken with a radius, chamfered, mitered, or shall be covered with a highly polished stainless steel or aluminum trim piece. **NO EXCEPTIONS**

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.2 Cab-Body Provisions:** The cab shall meet all the requirements of the Federal Motor Vehicle Standards in effect at the time of delivery, NFPA pamphlet 1901.

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.3 Cab Integrity Design and Personnel Safety Systems:** Due to the emergency response application of these vehicles the City of Fort Lauderdale desires to provide the safest environment possible for firefighting personnel. The following describes what the City feels is the benchmark for safety that all proposers are expected to respond. Each proposer shall respond to the utmost of their ability and shall list any exceptions or clarifications. Each proposer is encouraged to propose any safety feature that it feels will be beneficial to the overall safety of firefighting personnel. The City shall evaluate each proposal in relation to overall safety provided, understanding that all proposers may not be able to meet the specification in its entirety.

The fire apparatus manufacturer shall provide a cab crash test certification with this proposal. The certification states that the cab must meet or exceed the requirements below:

- European Occupant Protection Standard ECE Regulation No.29.
- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.
- SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.

An advanced side roll protection system shall be provided. The system shall be a supplemental restraint system designed for use with seat belts. The system shall be designed for a fast or slow vehicle 90-degree roll to the side, where the vehicle comes to rest on its side. The system shall consist of the following key components:

Side air bags shall only be provided outboard of the driver and officer forward positions. The side air bag shall be a tubular structure that extends diagonally across the width of the side window to help keep the occupant's head inside the vehicle and away from the window opening.

An integral suspension seat safety system shall be installed on the driver's seat. When activated, this system shall remove excess slack from the seat belt and retract the seat to its lowest travel position.

Seat belt pretensioners shall be provided in the remaining seating positions. When activated, these pretensioners shall remove excess slack from the seat belt.

Side wall impact-absorbing cushions shall be provided outboard of the crew cab seating positions.

A Side Roll Sensor shall be installed in the cab above the engine tunnel between the headliner and the cab roof skin. The sensor shall analyze the vehicle's angle and rate of roll to activate the advanced occupant restraints 120ms before the cab reaches 60 degrees from vertical. In the event of a side roll, the sensor shall activate the advanced occupant restraints. The sensor shall not activate in the event of a frontal impact, side impact, or any other incidents not involving a vehicle side rollover. If more than eight protective devices are required, a slave side roll sensor shall be provided with capacity for additional protective devices. The sensor(s) shall perform real time diagnostics of all critical subsystems and shall record sensory inputs immediately before and during a side roll event. A fault-indicating light shall be provided on the vehicles instrument panel.

The apparatus shall have three (3) crew seats in the crew cab.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**6.4 Controls and Operating Mechanism:** All cab controls and operating mechanisms shall meet the requirements of NFPA Pamphlet 1901, FMVSS and SAE specifications.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**6.5 NOT USED**

**6.6 Cab Design:**

The cab chassis shall be approximately 96.00" wide.. The minimum head room in the cab shall be 58" from floor to ceiling. The overall length of the cab from front to rear shall be a minimum of 148.00" inches. The rear wall of the cab aft of the rear side entry doors shall be extended as required to meet the cab overall length requirements. The cab shall be a full tilt design, allowing easy maintenance of engine compartment. The engine and transmission shall be accessible when the cab is titled and the engine and transmission shall also be removable when the cab is tilted. Provisions for checking the engine and transmission oil shall be provided on the engine tunnel and must be accessible without tilting the cab. Cab shall be isolated from the chassis inputs by rubber load cushions and shall be tilted by a hydraulic pump connected to two (2) cab lift cylinders. A manual safety stay arm shall be provided with remote release to hold the cab in the open position. Cab shall then be locked down by a 2-point automatic locking mechanism that actuates after the cab has been lowered.

Cab pivot grease points shall be extended to the side of the extended front bumper for ease of service.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**6.7** The cab step design shall be consistent with current apparatus in terms of providing the safest possible entry and egress from the cab. A standard of safety has been set by which the City would like to maintain. Step design can be air operated, electrically operated or of fixed design. The cab entrance steps surface shall be constructed out of non-slip material, which shall also be self-draining. Cab steps shall be constructed in a three-

step arrangement with each step being no more than 16 inches apart. From the ground to the first step shall not exceed 16 inches. Each step shall have a minimum of 160 square inches of step area. Non-slip material shall be made easily removable for cleaning of steps and surrounding area. Cab step design shall not affect the angle of approach. The cab and crew cab doors shall be approximately 32.00" wide. Crew cab doors shall be located on the side of the cab and shall extend into the 12" raised roof to provide easier entry and egress. The cab and crew cab doors shall be equipped with automotive rubber continuous perimeter seal on the door opening to ensure a weather tight fit. Polished stainless steel scuff plates shall be installed on the inside of all cab doors, extending from the bottom of the door to 12.00" inches above the floor line. All cab doors shall be constructed of aluminum with a double pan design and contain a conventional roll down window on stainless steel piano type hinge. A flush mounted, chrome plated paddle style, or push button door handles shall be provided on the interior and exterior cab and crew doors. All handles shall be locking and keyed alike. Six (6) sets of keys for each vehicle shall be provided on delivery. A 20.00" slip resistant handrail shall be installed on the inside of each cab door approximately 3.0" inches under the window mounted horizontally to assist with closing the doors, entering and exiting cab.

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.7.1** Fasteners used on the exterior of this vehicle shall be stainless steel. Exterior trim pieces may be aluminum. They shall be "machine" thread screws not "sheet" thread screws. The fasteners threads shall be coated with Loctite to prevent loosening from vibrations. The manufacturer shall paint all holes and provide nylon washers and rubber gasket underneath all fixtures and all screw heads to protect against corrosion from electrolysis. Ferrrous steel fasteners even if plated or coated shall not be acceptable. Should a vehicle be delivered without the fasteners or painted areas described above it will be rejected. **NO EXCEPTIONS.**

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.8 Engine Tunnel:** The cab and crew cab shall be designed to optimize room and allow complete visual and audio communications between all personnel. The engine tunnel shall be constructed out of .125"inch aluminum and shall be tapered at the top to allow for more driver and officer elbow room. The engine tunnel inside the cab shall not exceed 22.00" from the cab floor to the top of the engine tunnel with a width of the tunnel inside the cab not to exceed 26.00" inches on the top tapered surface and 41.00" inches at the floor surface. The engine tunnel shall also taper and narrow towards the rear as it extends into the crew cab area. Width of the engine tunnel on the top tapered surface at the rear shall not exceed 20.00" inches, therefore providing optimum room for the firefighters seated in the crew cab forward facing seats. Within this engine tunnel/hood, there shall be an upgraded insulation package for protection from heat and sound. The noise insulation shall keep the DBA level at an average not to exceed 80DBA at 45MPH at any given seat position. Testing shall be performed at window level for compliance to specifications upon delivery. A 4" metal lip shall run along the back, lower edge of the engine tunnel from the drivers' side to the interior EMS compartment to prevent loose turnout gear and equipment from sliding around in the cab onto the floor. **NO EXCEPTIONS**

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.9 Cab Flooring:** The cab and crew cab flooring shall be covered with aluminum and upgraded rubberized insulated flooring. The driver and officer shall have a flat floor area measuring a minimum of 21.50" wide (door to engine tunnel) and a minimum of 28.00" long (front to rear seat riser). The dimension from the back edge of the steering column to the driver's seat back (seat in rear most position) shall be a minimum of 30.00". A 20.00" slip resistant handrail shall be provided adjacent to all door openings to assist with entrance into the cab. A rubber-covered handrail shall be provided inside each front and rear cab door adjacent to the door posts.

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.10 Fenders:** There shall be provided circular inner fender liners in the wheel wells. There shall be provided on the vehicle, Stainless steel bolt on fender crowns over cab wheel openings to provide protection against wheel wash.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**6.10.1 Cab Exterior:** The outside rear wall of the crew cab shall be covered with a bright aluminum tread plate panel. The cab windshield shall be installed utilizing modern automotive techniques, which include bonding to the cab sheet metal with a urethane adhesive, and then trimmed in rubber. Windshield replacement shall be economical and replacement glass should be readily available.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**6.10.2 Cab Interior:** The finished cab and crew cab of the entire chassis, including storage cabinets and equipment, shall be impervious to soap and water, disinfectants, mildew, and shall be fire resistant as per FMVSS 301. Upholstered cushions shall be a minimum of 46-ounce upholstery material. They shall be assembled in such a fashion as to eliminate exposed welting and assure a minimum of exposed seams. This shall be done to reduce areas where contaminated fluids can collect. The color of the interior shall be Silver Gray Embossed vinyl provided by the successful proposer.

The cab instrument panel shall be padded and covered with 46 oz. leather grained vinyl. The door panels are to be covered with a high impact ABS plastic. The dash fascias shall be a wrap-around design to provide easy access of controls and shall be constructed out of high impact ABS plastic. The head liner shall be upgraded vinyl installed in both forward and rear cab sections. The Headliner material shall be perforated vinyl with a basket weaved pattern. It shall have an upgraded sound barrier as part of its composition. The material shall be installed on aluminum sheets and securely fastened to interior cab ceiling. The cab seat upholstery shall be silver Gray, Embossed 46 oz. Leather grain vinyl. The cab interior metal surfaces shall be painted black, vinyl texture paint, with durable vinyl texture paint.

Cab shall be pre-wired to accommodate specified radio communication equipment and MDT system on the dash area in a designated location. Rear engine tunnel shall be pre-wired and have rechargeable flashlights, thermal imagers, and radio battery charger specified installed in designated locations upon delivery.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**6.10.3 Interior Storage Cabinets:** An EMS compartment, 40.00" high x 27.00" wide x 23.50" deep shall be installed on the passenger's side outboard rear facing seat riser in the crew cab. Two (2) adjustable / removable shelves shall be provided in the compartment.

The compartment shall have one (1) Gortite or Robinson roll up door, locking, constructed of aluminum and with a satin white painted interior finish.

The compartment shall have chamfered edges and a minimum interior clear door opening of 30.00" high x 23.00" wide.

The compartment shall be constructed of aluminum and painted to match the cab interior.

On the exterior of the cab shall be a double pan lap door allowing access to the lower portion of the cabinet.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**6.10.4 Backboard Storage Compartment:****CUSTOM FIRE PUMPERS**

There shall be provided a behind the cab horizontal storage compartment. This compartment shall store two (2) backboards, 2.50" inches thick x 18.00" inches wide x 74.00" inches long in a side-by-side configuration. There shall be doors on each side of the compartment to allow the equipment to be removed from the apparatus. The compartment shall be mounted in a low position on the back of the cab to facilitate access while standing on the ground. Additional backboard storage box shall be added in the hose bed on the left side of the baffle (dimensions 20" height or same as baffle, 6" width, 85" length w/ a 4.5" opening).

**QUINT AERIAL APPARATUS**

There shall be provided below the turntable, one each side, compartments to hold backboards and long tools. The right side compartment shall store two (2) backboards, 2.50" inches thick x 18.00" inches wide x 74.00" inches long. The left side compartment shall store shovels, brooms, and various other long tools. Drop down or lift up doors shall be provided to allow the equipment to be removed from the apparatus.

Does your bid comply with this requirement?

YES ( )

NO ( )

**6.10.5 Cab Lift:** A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves. There shall be manual override for backup in the event of electric failure. Lift controls shall be located on the passenger side of the apparatus.

**NOTE: All exterior portions of this vehicle shall be free of all sharp projections. All exposed edges, corners, and ends shall be broken with a radius, chamfered, mitered, or covered with a highly polished stainless steel, or aluminum trim piece. NO EXCEPTIONS**

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.0 Water Tank and Vehicle Body.**

**7.1** The Booster tank shall minimum capacity of 700 gallons for CUSTOM FIRE PUMPERS and 300 gallons for QUINT AERIAL APPARATUS. They shall be constructed of polypropylene Plastic by United Plastic Fabricating, Incorporated. A 40-gallon foam cell shall be provided in the tank. The tank shall have a rectangular shape. The tank joints and seams shall be nitrogen welded inside and out. This tank shall be baffled in accordance with NFPA pamphlet 1901 requirements. The baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions shall be constructed of .38" inch polypropylene plastic and shall extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions shall extend from 4.00" inches off the bottom of the tank to the underside of the top cover. All partitions shall interlock and shall be welded to the tank bottom and sides. The tank top shall be constructed of .50" inch polypropylene. It shall be recessed .38 inches and shall be welded to the tank sides and the longitudinal partitions.

The tank top shall be sufficiently supported to keep it rigid during fast filling conditions. In the construction, there shall be included 2.00" inch polypropylene dowels spaced no more than 30.00" inches apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (.50" inch diameter, 13.00" inches deep) to accommodate lifting eyes.

A sump that is 8.00" inches long x 8.00" inches wide x 6.00" inches deep shall be provided at the bottom of the tank. Sump shall include a drain plug and the tank outlet. The tank shall be installed in a fabricated cradle assembly constructed of 3.00" inch x 3.00" inch x .25" angle iron with a corrosion resistant finish. Sufficient cross members shall be provided to properly support the bottom of the tank. The cross members shall be constructed of steel rectangular tubing with a corrosion resistant finish. This tank shall float in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" inches thick x 3.00" inches wide, shall be placed on all horizontal surfaces that the tank rests on. Stops or other provisions shall be provided to prevent an empty tank from bouncing excessively while moving the vehicle. Mounting system shall be approved by the tank

manufacturer. The fill tower shall be constructed of .50" inch polypropylene and shall be a minimum of 8.00" inches wide x 14.00" inches long. The fill tower shall be furnished with a .25" inch thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" inch schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and dump to the rear of the rear axle. This tank shall have a life time warranty. **NO EXCEPTIONS**

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.2 Hose Bed:** The hose body to be fabricated of .125" inch, 5052 Aluminum with a 38,000 PSI tensile strength. Hose body width to be a minimum of 68.00" inside. Upper and rear edges of side panels to have a double break for rigidity, a split tube finish will not be acceptable. The upper inside area of the beavertail are to be covered with polished stainless steel to prevent damage to painted surface when hose is removed. Flooring of the hose bed shall be removable aluminum, or fiberglass grating with the top surface corrugated to aid in hose aeration. The grating slats are to be a minimum of .50" inch x 4.50" inch with spacing between slats for hose ventilation. This hose bed shall accommodate 1000' feet of 5.00" Snap-Tite HFX LDH and 600' of 2.5" Ponn Conquest hose, all hose colors to be specified by the City of Fort Lauderdale . One (1) adjustable hose bed divider shall be furnished for separating hose. The divider shall be held in place by tightening two (2) bolts, one (1) at each end. Acorn nuts shall be installed on all bolts in the hose bed, which have exposed threads. Flat surfaces shall be sanded for uniform appearance, or constructed of brushed aluminum.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.2.1 Hose bed covers** (for CUSTOM FIRE PUMPERS only): A two (2) section hose bed cover, constructed of .125" inch bright aluminum tread plate shall be furnished. The sides shall be slanted down with the center of the cover supported by a stationary bridgework support at the front and rear of the hose bed. The cover support system shall be of the design that does not require a center stationary divider for support of the hose bed cover. All hose bed dividers shall be fully adjustable from side to side. The cover shall be reinforced so that it can support the weight limit of 500 lbs. Equal to two(2) men walking on cover. If the access to the water tank fill tower is blocked by the hose bed cover, then a hinged door shall be provided in it so that the tank may be filled without raising the cover doors. There shall be four(4) chrome grab handles and four(4)gas filled cylinders shall be provided to assist in the opening and closing of the cover. A handrail shall be provided at the rear, in the center of the support, to assist in opening the cover. A black vinyl cover flap shall be installed on the rear of the bright aluminum tread plate hose bed cover. The doors shall be arranged so the first door to open is the drivers' side, opposite the hydraulic ladder rack.

There shall be provided six (6) 12 volt lights installed on the underside of the hose bed covers to illuminate the hose bed with the covers in the open position. Controls for these lights shall be placed on the pump panel and in the cab overhead console.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.2.2 Hose bed cover** (for AERIAL LADDER only): A vinyl hose bed cover with "Lift-A-Dot" type fasteners shall be furnished.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.3 Running Boards:** The running boards shall be fabricated from .125" inch bright aluminum tread plate. Each running board shall be supported by a welded 2.00" inch square tubing and channel assembly with a corrosion resistant finish and shall be bolted and locktited to the pump compartment substructure. The running boards shall be spaced away from the pump panel. There shall be provided a splash guard below the running board tread plate. All body running boards, top mount access steps and the rear tailboard shall be Morton Case or equal inserts for additional slip resistance. An intermediate step shall be provided each side of the top mount walkway. Each step shall be full width of the walkway.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.4 Tailboard (FOR FIRE PUMPERS ONLY):** The rear step shall also be constructed of .125" inch bright aluminum tread plate and spaced .50" inch from the body, as well as supported by a substructure steel assembly. The rear tailboard shall be a minimum 21" deep in the center and shall extend the full width of the rear of the body with a 6" extended rear tailboard. The entire rear surface between the side compartments shall be covered with bright aluminum tread plate to protect the painted surface when removing hose. Inside surface of each beavertail in the hose bed area shall be covered with polished stainless steel to protect the paint finish. The remaining inside surface of the beavertails shall be covered with bright aluminum tread plate.

Does your bid comply with this requirement?

YES ( )

NO ( )

**Rear Bumper (FOR QUINT AERIAL APPARATUS):** A stainless steel rear bolt-on bumper shall be furnished.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.4.1 Tow Bar:** There shall be provided a tow bar under the tailboard at the center of the truck. This tow bar shall be fabricated of 1.00" inch CRS bar rolled into a 3.00" inch radius. The tow bar assembly shall be constructed of .38" inch structural angle. When force is applied to the bar, it shall be transmitted to the frame rails. The tow bar assembly shall be designed and positioned to allow up to a 30 degree upward angled pull of 20,000 pounds, or a 17,000 pound straight horizontal pull in line with the centerline of the vehicle. The tow bar design shall have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.5 Compartmentation:** The body compartments shall be fabricated of .125" inch 5052-H32 aluminum. The side compartments shall be an integral assembly with the rear fenders. Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance. The compartment door opening shall be framed by flanging the edges in 1.75" inch and bending out .75" inch to form an angle. Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum tread plate or polished stainless steel. The top of the compartments shall be covered with bright aluminum tread plate rolled over the edges on the front, rear, and outward sides. These covers shall have the corners "TIG" welded. The side compartment covers shall be separate from the compartment tops. The front facing compartment walls shall be covered with bright aluminum tread plate. All screw and bolt threads shall be coated with locktite to prevent loosening from vibrations. The manufacturer shall paint all holes and provide nylon washers and rubber gasket underneath all fixtures and all screw heads to protect against corrosion from electrolysis. Ferrous steel fasteners even if plated or coated shall not be acceptable. All screws and bolts that protrude into a compartment shall have an acorn nut with locktited threads. Should a vehicle be delivered without the fasteners, or painted areas described above, it will be rejected.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.6 Underbody Support System:** Due to the severe loading requirements of this pumper, a method of body and compartment support suitable for the intended load shall be provided. The backbone of the support system shall be the chassis frame rails, which is the strongest component of the chassis and is designed for sustaining maximum loads. Supports system shall include steel or aluminum vertical angles gazzette and welded to the vertical members, extending to the outside edges of the body. A steel or aluminum frame shall be mounted on the top of these supports to create a "floating substructure" which shall result in a 500-pound equipment load support rating per lower compartment. The floating substructure shall be separated from the horizontal members with a neoprene elastomer isolators. These isolators shall reduce the natural flex stress of the chassis from being transmitted to the body. Isolators shall have a broad load range, proven viability in vehicular applications, be of a fail-safe design and allow for all necessary movement in three(3) transitional and rotational modes.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.7 Louvers:** All body compartments shall have a minimum of one (1) set of louvers stamped into a wall at top of compartment to provide the proper airflow inside the compartment, except for the Medical Compartment.

Does your bid comply with this requirement?

YES ( )

NO ( )

### 7.8 Not Used.

**NOTE:** All compartments shall be welded construction. They shall be welded the full length of their seams and be completely water tight. Spot welded seams are not acceptable. The floor of the exterior compartments shall be of the sweep out or flush style. Compartments that have a "lip" at the floor line are not acceptable. **NO EXCEPTIONS.**

### 7.9 Compartmentation (CUSTOM FIRE PUMPERS ONLY)- Driver's Side:

Compartment 1: There shall be a full height, Gortite or Robinson Roll-up door compartment ahead of the rear wheels provided. The interior dimensions of this compartment shall be 34.50" wide x 66.13" high x 25.75" deep in the lower 58.25" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 28.75" wide x 58.25" high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one (1) hand.

Compartment 2: There shall be a Gortite or Robinson Roll-up door compartment over the rear wheels provided. The interior dimensions of this compartment shall be 66.50" inches wide x 31.38" inches high x 25.75" inches deep in the lower 25.38" inches of the compartment and 15.63" inches deep in the remaining upper portions. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 58.25" inches wide x 25.12" inches high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one (1) hand.

Compartment 3: A full height, roll-up door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 47.50" wide x 58.25" high x 25.88" deep in the lower 36.00" of height and 12.00" deep in the remaining upper section of the compartment, by the tailboard. The upper forward 31.50" portion of this compartment shall remain 25.88" deep. The height of the compartment shall be measured from the compartment floor to the bottom edge of the door roll. The depth of the compartment shall be calculated with the compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 44.75" wide x 58.25" high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one (1) hand.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.9 Compartmentation (QUINT AERIAL APPARATUS ONLY)- Driver's Side:**

A full height roll-up door compartment, ahead of the rear wheels, 41.75" wide x 64.00" high x 24.25" deep inside with a clear door opening of 38.75" wide x 56.38" high.

One (1) roll-up door compartment, above the fender compartments and over the rear axles. The compartment shall be 72.13" wide x 33.25" high x 24.25" deep inside with a clear door opening of 63.75" wide x 25.50" high.

A compartment with a single pan stainless steel door shall be located above the front stabilizer. The compartment shall be 23.00" high x 18.00" wide x 24.25" deep with a door opening of 15.75" high x 12.00" wide.

There shall be a notch in the rear wall of the compartment over the rear wheels to allow for a hose chute.

A full height, roll-up door compartment shall be provided, located behind the rear wheels, 43.75" wide x 49.25" high x 21.25" deep inside the lower 29.75", and 12.00" deep in the upper portion. The clear door opening shall be 40.75" wide x 41.62" high.

There shall be one (1) compartment, below the turntable, with a roll-up door. The compartment shall be 39.38" wide x 18.38" high x 12.00" deep, with a door opening of 33.75" wide x 10.75" high.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.9.1 Compartmentation (CUSTOM FIRE PUMPERS) - Rear:**

Compartment 4: There shall be a Gortite or Robinson Roll-up door compartment above the rear tailboard provided. The interior dimensions of this compartment shall be 40.00" inches wide x 47.38" inches high x 38" inches deep in the lower 38.75" inches of height and 15.75" inches deep in the remaining upper portions. Depth of the compartment shall be calculated with the compartment door closed. A louvered, removable access panel shall be furnished on the back wall of the compartment. Clear door opening of this compartment shall be 38.75" inches wide x 32.38" inches high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one (1) hand. Two (2) partitions shall be bolted in place to separate both side rear compartments from the rear tailboard compartment. There shall be two(2) TNT EDR-100-E-B 100" electric hose reels mounted in the ceiling of this compartment. Hoses shall be coupled at 70', 1 shall be black, 1 shall be red (all hose must be TNT). 1 TNT S-100-28 hydraulic spreader and 1 TNT C-25 hydraulic cutter shall be mounted by the manufacturer in coordination with TNT representation in the bottom of this compartment on a slide out tray in a manner suitable to the City of Fort Lauderdale

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.9.1 Compartmentation (QUINT AERIAL APPARATUS) - Rear:**

Compartment 4: There shall be a Gortite or Robinson Roll-up door compartment at the rear. This compartment shall enclose ground ladders as well as additional pike poles.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.9.2 Compartmentation (CUSTOM FIRE PUMPERS)- Passenger's Side:**

Compartment 5: A full height, roll-up door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 47.50" wide x 58.25" high x 25.88" deep in the lower 36.00" of height and 12.00" deep in the remaining upper section of the compartment, by the tailboard. The upper forward 31.50" portion of this compartment shall remain 25.88" deep. The height of the compartment shall be measured from the compartment floor to the bottom edge of the door roll. The depth of the compartment shall be calculated with the

compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 44.75" wide x 58.25" high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one (1) hand.

Compartment 6: There shall be a Gortite or Robinson Roll-up door compartment over the rear wheels provided. The interior dimensions of this compartment shall be 66.50" inches wide x 31.38" inches high x 25.75" inches deep in the lower 25.38" inches of the compartment and 15.63" inches deep in the remaining upper portions. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 58.25" inches wide x 25.12" inches high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one (1) hand.

Compartment 7: There shall be a full height, Gortite or Robinson Roll-up door compartment ahead of the rear wheels provided. The interior dimensions of this compartment shall be 34.50" wide x 66.13" high x 25.75" deep in the lower 58.25" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 28.75" wide x 58.25" high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one (1) hand.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.9.2 Compartmentation (QUINT AERIAL APPARATUS) – Passenger’s Side:**

A full height roll-up door compartment, ahead of the rear wheels, 41.75" wide x 64.00" high x 24.25" deep inside with an clear door opening of 38.75" wide x 56.38" high.

One (1) roll-up door compartment, above the fender compartments and over the rear axles. The compartment shall be 72.13" wide x 33.25" high x 24.25" deep inside with a clear door opening of 63.75" wide x 25.50" high.

A compartment with a single pan stainless steel door shall be located above the front stabilizer. The compartment shall be 23.00" high x 18.00" wide x 24.25" deep with a door opening of 15.75" high x 12.00" wide.

There shall be a notch in the rear wall of the compartment over the rear wheels to allow for a hose chute.

A full height, roll-up door compartment shall be provided, located behind the rear wheels, 43.75" wide x 49.25" high x 21.25" deep inside the lower 29.75", and 12.00" deep in the upper portion. The clear door opening shall be 40.75" wide x 41.62" high.

There shall be one (1) compartment, below the turntable, with a roll-up door. The compartment shall be 39.38" wide x 18.38" high x 12.00" deep, with a door opening of 33.75" wide x 10.75" high.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.9.3 Doors, side compartments:** All roll-up doors shall be Gortite or R.O.M. Robinson brushed aluminum. A roll-up door which retracts below compartment ceiling (garage door style) is not acceptable. The header for the roll-up door assembly shall not exceed 4.00" inches. A heavy-duty magnetic switch shall be used for control of "open compartment Door" warning lights.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.9.4 Compartment Matting:** There shall be Black Turtle Tile Matting provided in each compartment on the floors, trays and shelves of all eight(8) compartments.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**7.9.5 Compartment Reinforcement:**

The compartment floor shall be reinforced with a section of bright aluminum tread plate in all compartment floors. This is in addition to the standard compartment floor for addition strength. The tread plate shall be secured in place and have all edges sealed with silicon caulk.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**7.9.6 Pull-out Trays:** There shall be five (5) slide-out trays with 2.00" sides and a minimum capacity of 500 pounds provided. Capacity rating shall be in the extended position. Slides shall be General Device ball bearing type for ease of operation and years of dependable service. Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for it shall be located at the front of the tray for ease of use with gloved hand. Tray locations shall be determined at the pre-construction conference. Heavy-duty, corrosion resistant steel angle iron assembly shall support body under the compartment floor. It shall be attached to the chassis frame for load transfer and reduce stress on the body.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**7.9.7 Pull-out Adjustable Height Trays:** There shall be two (2) slide-out trays with 2.00" inch sides and a minimum capacity of 500 pounds provided. Capacity rating shall be in the extended position. Slides shall be Jonathan Brand with ball bearings for ease of operation and years of dependable service. Tray locations shall be determined at the pre-construction conference. Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for it shall be located at the front of the tray for ease of use with a gloved hand. Each tray shall be adjustable up and down within the compartment.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**7.9.8 30 Degree Drop Down Pull-out Adjustable Height Tray:** There shall be four (4) slide-out trays with a 2.00" inch sides that pull-out and drop-down at a 30 degree angle for easy access to equipment and supplies. Minimum capacity rating of 250 pounds shall be in the extended position. Trays location shall be determined at the pre-construction conference. Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for it shall be located at the front of the tray for the ease of use with gloved hand. Each tray shall be adjustable up and down within the compartment.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**7.9.9 Adjustable Shelves:** There shall be four (4) shelves provided the shelf construction shall consist of .125" inch aluminum in a pan shape with 2.00" inch sides. Each shelf shall be infinitely adjustable by means of a threaded tightener sliding in a track. The track shall be the Uni-Strut Brand Track or brand equal too in strength. The location of the eight (8) shelves shall be determined at the pre-construction conference.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**7.9.10 Mounting Track:** There shall be eight (8) sets of tracks for mounting equipment in all compartments. These tracks shall be installed vertically to support the adjustable shelves.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.10 Rub Rail:** The bottom edge of the side compartments shall be trimmed with a bright aluminum extruded or stainless steel rub rail. Within this rub rail, all fasteners shall be recessed. There shall be a 1.00" inch 3M Scotchlite Diamond Grade Reflective White strip, Model 3970G provided within the center of the rub rail. The trim shall be approximately 2.12" inches high with a 1.38" inch flanges turned outward for rigidity. The rub rail shall not be an integral part of the body construction, allowing for replacement in the event of damage.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.11 Body Fender Crown:** A stainless steel, or aluminum fender crowns shall be provided around the rear wheel openings. A rubber welting shall be provided between the body and the crown to seal the seam and restrict moisture from entering. A dielectric barrier shall be provided between the fender crown fasteners (screws) and fender sheet metal to prevent corrosion.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.12 Hard Suction Hose (FOR FIRE PUMPERS ONLY):** There shall be two (2) hard suction hoses, 6.00" inches Maxi-Flex lightweight hard suction hoses provided. Each length shall be equipped with a long handle female coupling on one (1) end and a rocker lug male coupling on the other end. Couplings to be hard coated aluminum.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.12.1 Hard Suction Hose Troughs (FOR FIRE PUMPERS ONLY):** Hard suction hose shall be carried above the left compartment in V shaped troughs and held in place by chrome plated, quarter turn, spring loaded clamps.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.13 Running Board Hose Trays:** Recessed in the running board on each side below the side panels shall be a tray for 20' foot of 5.00" soft suction hose and 50' of 2.5" hose. A black rubber grating shall be provided in the bottom of each tray. Tray shall be vented to adequately accommodate drainage.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.14 Handrails:** The handrails shall be 1.28" inches in diameter extruded aluminum with bright dip, clear anodized finish. Rubber inserts shall be placed at three (3) equidistant locations (parallel to centerline) around the circumference of the extrusion to provide a positive gripping surface. Chrome plate end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces. Drain holes shall be located as following:

1. One (1) vertical handrail, not less than 29.00" inches long, on each rear beavertail.
2. One (1) full width horizontal handrail below the hose bed at the rear of the apparatus.
3. A handrail on each side of the top mount control panel.
4. Four (4) additional handrails shall be provided with final locations to be determined at the pre-construction conference.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.15 Air Bottle Storage :** There shall be a total of four (4) air bottle compartments provided. Two compartments located on each side over the rear wheels. Storage for a total of four (4) air bottles shall be provided. No bottles shall be stored in compartments or cab. The bottle compartments shall be in the form of a round tube (7.63" in diameter minimum) and of adequate depth to accommodate different size air bottles. Flooring shall be rubber lined and have a drain hole. A stainless steel, or brushed aluminum door with a chrome plated latch shall be provided to contain the air bottle. A dielectric barrier shall be provided between the door hinge, hinge fasteners (screws) and the body sheet metal.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.16 Hydraulic Ladder Rack (FOR FIRE PUMPER ONLY):** Ground ladders shall be mounted above the right side of the hose body in a specially designed swing-down cradle. This cradle shall be electric/hydraulic operated. The system design shall have been life cycle tested with details of testing to be provided in the bid. An independent hydraulic pump powered by a 12-volt electric motor shall operate the hydraulics. Operation of the hydraulic system for the ladder rack by an engine-powered pump shall be totally unacceptable. The hydraulic pump and reservoir shall be accessible from the ground through a stainless steel inspection door.

The ladder rack shall incorporate two hydraulic rotary actuators, one each located inside the front compartment and the rear compartment. The actuators shall be completely enclosed within each compartment to eliminate any pinch points while operating the ladder rack. Lifting arms shall be attached outside the compartment body to the front and rear actuator. A center-lifting arm built into the compartment space is unnecessary and is unacceptable.

The rack can be designed in certain situations to provide lifting capabilities up to 500lbs.

The maximum height of the rack from the ground in the lowered position shall be no more than 47.00".

The electric control panel shall have a master on/off switch, an actuation switch, an operation indicator light and operation instructions. The electric controls shall be located in such a manner to allow the operator full view of the area into which the ladders shall be lowered.

Two (2) air operated safety locks shall be furnished to securely maintain the ladder bracket assembly in the travel position. These air operated safety locks shall be controlled from the ladder rack control panel.

Ladders shall be secured to the brackets with two (2) locks retaining the roof ladder and the extension ladder. The locks shall be such that when the roof ladder is removed, the clamps can be moved a half turn to hold the extension ladder in place.

An interlock shall be provided to prevent operation of the ladder rack unless the apparatus parking brake has been activated.

A steady red indicator light shall be located on the cab instrument panel and illuminated when the hydraulic ladder rack is not in the stowed position. The light shall be labeled "Ladder Rack". In addition, the "Do Not Move Apparatus" light located in the cab shall be activated when the hydraulic ladder rack is not in the stowed position.

Flashing amber lights facing the front and rear shall be provided on the ladder rack and activated whenever the rack is in the down position.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.16.1 Ladders (FOR FIRE PUMPERS ONLY):** The following Alco-Lite Ladders are to be furnished and installed in position on the apparatus. This equipment must meet or exceed the latest NFPA Standards:

- 1. 24' Foot two (2) section, Series ALP-200-24
- 2. 14' Foot one (1) section, Series ALP-100-14
- 3. 10' Foot Folding Section, Series ALP-080-10

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.16.1 Ladders (FOR QUINT AERIAL APPARATUS ONLY):** The following Alco-Lite Ladders are to be furnished and installed in position on the apparatus. This equipment must meet or exceed the latest NFPA Standards:

- 1. One 35' three (3) section Series ALP-300-35
- 2. One 24' Foot two (2) section, Series ALP-200-24
- 3. Two (2) 16' Foot one (1) section, Series ALP-100-16
- 4. One 10' Foot Folding Section, Series ALP-080-10
- 5. One 14' Attic ALP-075-14

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.16.2 Pike Poles (FOR FIRE PUMPERS ONLY):** The following hooks are to be furnished and installed in position on the apparatus. This equipment must meet or exceed the latest NFPA Standards:

- 1. 8' Foot Firehooks APH-8'
- 2. 6' Foot Firehooks UH-6'
- 3. 6' Foot Firehooks RH-6'

There shall be aluminum tubing provided for the storage of the two (2) Pike Poles and shall be located on the hydraulic ladder rack. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuff plate shall be provided. The third hook shall be mounted above the backboard box on the back of the cab (or other specified location) with brackets similar to the ones currently in use by the fire department to mount similar equipment. **NO EXCEPTIONS.**

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.16.2 Pike Poles (FOR QUINT AERIAL APPARATUS ONLY):** The following hooks are to be furnished and installed in position on the apparatus. This equipment must meet or exceed the latest NFPA Standards:

- 1. (2) Firehooks Unlimited DWHS – 6'
- 2. (2) Firehooks Unlimited UH – 6'
- 3. (2) Firehooks Unlimited RH – 6'
- 4. (1) Firehooks Unlimited MPH – 8'
- 5. (1) Firehooks Unlimited UH – 8'
- 6. (1) Firehooks Unlimited MPH – 12'
- 7. (1) Firehooks Unlimited UH – 12'

There shall be aluminum tubing provided for the storage of eight (8) hooks inside the rear ladder storage compartment. Two of the 6' hooks shall be mounted on the rear of the cab in a location and manner to be determined at pre-construction.

Does your bid comply with this requirement?

- YES ( )
- NO ( )

**7.16.3 Shovel Storage (FOR FIRE PUMPERS ONLY):** Located above the pump with an access door on the passenger side. The following shovels or equivalent are to be furnished. Shovel handles must be of fiberglass construction. This Equipment must meet or exceed the latest NFPA Standards:

1. Nupla, Round Nose, Model RP2L 48" inch Handle
2. Nupla, Square Nose, Model SPD6 48" inch Handle
3. Nupla, Scoop Nose, Model AGS14 27" inch Handle with D Grip

Does your bid comply with this requirement?

YES ( )

NO ( )

### 7.16.3 NOT USED for QUINTS

**7.16.4 Keep Back Sign:** There shall be a "Keep Back 500 Feet" sign mounted at the rear of the apparatus. It shall have white reflective lettering with a red background.

Does your bid comply with this requirement?

YES ( )

NO ( )

**7.16.5 Access Steps:** There shall be two (2) large access steps provided on each side front of each fender compartment. They shall be a bright finished folding step type. There shall be four (4) bright finished large folding type steps provided at the rear for access to the hose bed. These steps shall be braced to handle a minimum of 500 pounds. For CUSTOM FIRE PUMPERS, A camper style step shall be installed on the driver's side below rear tailboard to assist in climbing the rear tailboard. The step shall pull out and fold down. The step surface shall be a non-slip type. This step shall be 4.00" deep using two aluminum extrusions. Two (2) pull-out steps shall be provided one each side below the running board at the top mount panel. Each step rung shall be 21.38" wide and shall pull out and drop down to provide easy access. For QUINT AERIAL APPARATUS, there shall be recessed steps for access to the turntable on each side of the body toward the rear, stairway style. There shall be a flip down step to provide easy access to the turntable steps when the apparatus has been elevated by the outriggers.

Does your bid comply with this requirement?

YES ( )

NO ( )

## 8.0 Water Pump.

**8.1** There shall be a Waterous or Hale CMUY 1500 GPM, two stage midship mounted centrifugal pump provided. The pump shall be the class "A" type. Pump shall deliver the percentage of rated discharge at pressure indicated below.

- 100% of the rated capacity at 150 psi net pump pressure.
- 70% of the rated capacity at 200 psi net pump pressure.
- 50% of the rated capacity at 250 psi net pump pressure.

The pump body shall be close-grained gray iron, bronze fitted, and must be horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly ( including wear rings ). Pump shall be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping. The pump case halves shall be bolted together on a single horizontal face, to minimize chance of leakage and facilitate ease of reassembly. No end flanges discharge manifold of the pump shall be cast as an integral part of the pump body assembly, and shall provide a minimum of three (3) 3.50" inch openings, for flexibility in providing various discharges outlets for maximum efficiency. The 3.50" inch opening shall be located as follows:

1. One (1) outlet to the right of the pump.
2. One (1) outlet to the left of the pump.
3. One (1) outlet directly on top of the discharge manifold.

The impeller shaft shall be stainless steel accurately ground to size, and supported at each end by oil or grease lubricated, anti-friction ball bearings, for rigid precise support. Impeller shall have heat treated hubs assuring maximum pump life and efficiency, despite any presence of abrasive matter in the water supply. The bearings shall be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearing shall be used. A electric transfer valve with a manual override shall be provided at the top mount operator's control panel.

Transfer valve design shall be of the latest ball type, of all bronze construction and incorporate a hydraulically balanced seal assembly, minimizing leakage around the ball and assuring maximum pump efficiency. Transfer valve shall operate smoothly and without sticking, even when exposed to sandy or dirty water.

Transfer valve shall be operated electrically with a control switch mounted on the pump operator's control panel, with two (2) indicator lights which shall indicate "pressure" or "volume". Transfer valve shall have the ability to change from series (pressure) operation to parallel (volume) operation without reducing the operating speed of the engine regardless of the operating pressure of the pump, thus maintaining an effective fire stream at the nozzle at all times.

A manual override shall be provided in the event of electrical malfunction. The manual override system operates with the use of a removable hand crank located at the left (driver's) side pump panel. Cylindrical type transfer valves shall not be acceptable.

Does your bid comply with this requirement?  
 YES ( )  
 NO ( )

**8.2 Pump Transmission:** The pump transmission is to be made of iron with a horizontally split casing. The power transfer to pump shall be by gear or chain. Drive shafts shall be a minimum of 2.35" inch diameter hardened and ground alloy steel. All shafts are to be ball bearing supported. The case is to be designed as to eliminate the need for water cooling.

Does your bid comply with this requirement?  
 YES ( )  
 NO ( )

**8.3 Air Pump Shift:** The pump shift engagement shall be made by a two(2) position sliding collar, actuated pneumatically (by air pressure), with a three(3) position air control switch located in the cab. A manual back-up shift control shall also be located on the drivers side pump panel. Two(2) indicator lights shall be provided adjacent to the pump shift inside the cab. One(1) green light shall indicate the pump shift has been completed and be labeled "PUMP ENGAGED". The second green light shall indicate when the pump has been engaged, and the chassis transmission is in pump gear. This indicator light shall be labeled "OK TO PUMP". Another green indicator light shall be installed adjacent to the hand throttle on the pump panel and indicate either the pump is engaged and the road transmission is in pump gear, or the road transmission is in neutral and the pump is not engaged. This indicator light shall be labeled "WARNING: DO NOT OPEN THROTTLE UNLESS LIGHT IS ON". The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control in the cab is activated.

Does your bid comply with this requirement?  
 YES ( )  
 NO ( )

**8.4 Auxiliary Cooling System:** There shall be a supplementary heat exchange cooling system provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger is to be cylindrical type constructed of all brass and is to be a separate unit. It is to be installed in the pump or engine

compartment with the control located on the pump operator's control panel. The exchanger shall be plumbed to the master drain valve. Engine water lines to be run inside plastic conduit, or stainless steel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.5 Mechanical Pump Seal:** The pump shall be equipped with a self-adjusting, maintenance free, mechanical shaft seal. The mechanical seal shall consist of a flat, highly polished, spring fed carbon ring that rotates with the impeller shaft. The carbon ring shall press against a highly polished stainless steel stationary ring that is sealed within the pump body. In addition, a throttling ring shall be pressed into the steel chamber cover, providing a very small clearance around the rotating shaft in the event of a mechanical seal failure. The pump performance shall not deteriorate, nor shall the pump lose prime, while drafting if the seal fails during pump operations. Wearing rings shall be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.6 Intake Relief Valve:** A relief valve shall be installed on the suction side of the pump preset at 125 PSIG. The relief valve shall have a working range of 75 PSIG to 250 PSIG. The outlet shall terminate below the left side, visible to the operator, with a 2.50" inch National Standard Hose thread adapter and shall have a "DO NOT CAP" warning tag. Control shall be located behind an access door at the right (passenger's) side pump panel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.7 Pressure Controller:** There shall be an all electric pressure governor provided which is capable of automatically maintaining a desired preset discharge pressure within a range of 0 to 400 psi. This system shall not require a mechanical drive, oil, or air supply for a means of control. When operating in the pressure control mode, the system shall automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow. The engine speed shall return to idle if discharge pressure is lost for more than five (5) seconds, thus offering cavitation protection to the pump and preventing operation of the engine at a high speed. While operating in the throttle control mode, the system shall automatically maintain the engine speed set by the operator regardless of the load. In addition to providing normal throttle functions, the throttle control mode can also be used to back up the pressure mode. The pressure signal shall come from a pump mounted pressure transducer, allowing direct reading of pressure without requiring water flow through the transducer, or any part of the pressure control system. A green light, labeled "GOVERNOR SYSTEM ACTIVE", shall indicate whenever the pressure governor is activated. An interlock shall be incorporated into the governor that would allow the system to be operational only when the parking brake is set and the transmission is in drive with the midship pump engaged, or with the transmission in neutral. **NO EXCEPTIONS.** The system shall have a high idle mode that will automatically maintain an engine RPM as preset by the operator. A momentary switch shall be installed at the cab instrument panel for activation and deactivation. The high idle mode shall be operational only when the parking brake is on and the truck transmission is in neutral. A control panel shall be located at the pump operator's panel and consist of a series of indicator lights denoting system mode selection. When the operator chooses either the pressure control mode or throttle control mode. A green light shall come on indicating the system selected. A momentary switch shall be used to provide an infinite number of settings for increasing or decreasing water pressure or engine speed. The operator's panel shall also incorporate a system shutdown push button that shall return the engine speed to idle. A VHS video tape describing the operation of the pressure controller and troubleshooting procedures shall be provide with the delivery of the apparatus. **NO EXCEPTION.**

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.8 Primer:** Priming pump shall be a positive displacement vane type, electrically driven, and conforming to standards outlined in NFPA pamphlet #1901. One (1) priming control shall open the priming valve and start the priming motor. Primer shall be environmentally safe and self-lubricating.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.9 Pump Test:** The pump shall be tested, approved and certified by an independent third party testing agency at the manufacturer's expense. The test results along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve and the manufacturer's record of the pump construction details must be forwarded to the City of Fort Lauderdale Fire Rescue Department. **NO EXCEPTIONS.**

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.9.1 Pump Warranty:** A full two (2) year warranty shall be provided for the pump by the pump manufacturer

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.9.2 Plumbing:** All inlet and outlet lines shall be 3.00" inch in diameter or less shall be plumbed with either heavy-duty stainless steel threaded pipe or synthetic rubber hose reinforced with hi-tensile polyester braid. Larger inlets and outlets can be threaded or welded black iron pipe. If welded, large radius elbows must be used - Mitered joints will not be acceptable. If hose is used, it must have a burst pressure rating of 1,200 PSI and be equipped with high-pressure Brass or stainless steel couplings. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings. All lines to drain through either a master drain valve or shall be equipped with individual drain valves. All individual drain lines for discharges shall be extended with a rubber hose to drain below the chassis frame. All water carrying gauge lines shall be of flexible polypropylene tubing. A 6.00" inch pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump. On the CUSTOM FIRE PUMPERS, An Elkhart Brass 9786 AL-MAG 6" FNST x 5.00" Storz piston intake gated relief valve with swivel shall be provided on the right and left side. For the QUINT AERIAL APPARATUS, Large diameter, gear operated, manually controlled, master intake valves shall be provided on the right and left side of the pump and positioned internally behind the panels. The main pump inlets shall have National Standard Threads with a long handle chrome cap.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.9.3 Short Suction Tube:** The suction tubes on the midship pump shall have "Short" suction tubes to allow for installation of adapters without excessive overhang.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.10 Valves:** All discharges / intakes shall use Elkhart brand in-line ball valves.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.11 Inlets - Left Side:** On the left side of the pump panel, there shall be one(1) auxiliary 3.00" inch suction terminating in 2.50" inch National Standard Hose Thread shall be provided with strainer and chrome swivel, plug and 50' of 2.5" Ponn Conquest hose provided and attached. Suction inlet shall be recessed behind the pump panel and shall be controlled from the top mounted operator's position.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.12 Inlets - Right Side:** On the right side of the pump panel, shall be one(1) auxiliary 3.00" inch suction terminating in 2.50" inch National Standard Hose Thread shall be provided with strainer, chrome swivel, plug and 50' of 2.5" Ponn Conquest hose provided and attached. Suction inlet shall be recessed behind the pump panel and shall be controlled from the top mount operator's position.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.13 Tank To Pump:** The booster tank shall be connected to the intake side of the pump with heavy duty piping and quarter turn 3.00" inch full flow valve with the control remotely located at the operator's panel. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.14 Tank Refill:** There shall be a 2.00" inch combination tank refill and pump bypass line provided using a quarter turn full flow ball valve controlled from the pump operator's panel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.15 Discharge Outlets - Left Side:** There shall be two (2) discharge outlets with 3.00" inch valves and piping on the left side of the apparatus, terminating with a male 2.50" inch National Standard Hose Thread adapter.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.16. Discharge Outlets - Right Side:** There shall be one (1) discharge outlet with a 3.00" inch valves and piping on the right side of the apparatus, terminating with a 2.50" inch male National Standard Hose Thread adapter.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.17 Master Discharge Outlets:** There shall be a 5.00" inch discharge outlet with a 5.00" inch valve installed on the right side of the apparatus, terminating with a male 5.00" inch National Standard Hose Thread adapter. This discharge outlet shall be actuated with a handwheel control at the top mount pump operator's control panel. A 5.00" inch NST x 5.00" inch Storz 30 degree adapter shall be provided.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.18 Discharge Outlet ( FOR CUSTOM FIRE PUMPER ONLY)- Front Bumper:** There shall be an 1.50" inch gated discharge outlet with a swivel, piped to the center tray of the front bumper extension. Plumbing shall consist of 2.00" inch piping with a 2.00" inch full flow ball valve controlled at the pump operator's panel terminating with a 1.50" inch male National Standard Hose Thread Adapter.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.19 Discharge Outlet (FOR CUSTOM FIRE PUMPER ONLY) - Rear:** There shall be one(1) discharge outlet piped to the rear of the hose bed, on the right side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing shall consist of 3.00" inch piping along with a 3.00" inch full flow ball valve with the control from the top mount pump operator's panel. Outlet shall terminate 2.50" inch NST.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.20 Discharge Caps:** There shall be chrome plated, rocker lug, caps with chains shall be furnished for all discharge outlets.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.21 Outlet Relief Bleeders:** A .75" inch, turn type, bleeder valve shall be provided for each 1.50" inch or larger outlet. The valves shall be located behind the side pump panel with a handwheel type control extended to the outside of the panel. Bleeders are to be located in a horizontal line at the bottom of the pump panel. They are to be properly labeled identifying the discharge they are plumbed into. The water discharged by the bleeders shall be routed below the chassis frame rails.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.22 Elbows - Left Side Outlets:** The 2.50" inch discharge outlets, located on the left side pump panel, shall be furnished with a 2.50" inch (F) National Standard Hose Thread x 2.50" inch (M) National Standard Hose Thread, chrome plated, 45 degree elbows

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.23 Elbows - Right Side Outlets:** The 2.50" inch discharge outlets, located on the right side pump panel, shall be furnished with a 2.50" inch (F) National Standard Hose Thread x 2.50" inch (M) National Standard Hose Thread, Chrome plated, 45 degree elbows

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.24 Elbows - Rear Outlets (FOR CUSTOM FIRE PUMPERS ONLY):** 2.50" inch discharge outlets, located at the rear of the apparatus, shall be furnished with a 2.50" inch (F) National Standard Hose Thread x 2.50" inch (M) National Standard Hose Thread, chrome plated, 45 degree elbow.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.25 Elbow, - 4.00" inch Outlets:** The 4.00" inch outlet shall be furnished with a 4.00" inch (F) National Standard Hose Thread x 5.00" inch Storz elbow adapter with Storz cap.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.26 Discharge Outlet Controls:** The discharge outlets shall incorporate a quarter turn ball valve with the control located at the top mount pump operator's panel. Discharge pressures shall be measured after the last bend in the plumbing and within 4" of the discharge opening to ensure accurate pressure readings.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.27 Deluge Riser (FOR CUSTOM FIRE PUMPERS ONLY):** There shall be a 3.00" inch deluge riser installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping is to be installed securely so no movement develops when the line is charged. The riser shall be gated and controlled at the pump operator's panel. A micro-switch or magnetic switch shall be provided that will activate the "DO NOT MOVE APPARATUS" light in the cab whenever the deck gun/monitor is not in the resting/stored position.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.28 Monitor(FOR CUSTOM FIRE PUMPERS ONLY):** An Elkhart Brass portable deck gun monitor model 8297-51 Stinger 2.0 shall be properly installed on the deluge riser. The monitor shall include a model 282A stream shaper with ST-194 stack tips and SM-1250@75 fog nozzle and 8298EX pipe for Stinger 2.0. This monitor will include both a fixed mounting base model 8298 top mount adapter and a portable base with 5.00" inch Storz inlet. The Deluge riser shall have male National Standard Pipe Threads for mounting the monitor. The "Do Not Move Apparatus" light in the cab shall be activated if the monitor is not in the stowed position and the parking brake is released.

\*Fixed Deck Gun feature – 8500 Vulcan RF 3" direct thread mount (with auto extension if available.)

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.29 1.75" and 2.50" Inch Speedlay Hose beds (3) :** Ahead of the pump enclosure shall be two (2) 1.75" and one (1) 2.5" speedlay hose beds. Two (2) speedlay compartments shall have a 2.00" preconnect line with a 2.00" quarter turn ball valve and terminate with a 1.50" National Standard hose thread 90 degree swivel. One (1) speedlay compartment shall have a 2.50" preconnect with a 3.00" quarter turn ball valve and plumbing, terminating with a 2.50" National Standard hose thread 90 degree swivel. Individual controls for the speedlays shall be at the pump operator's panel.

Two (2) compartments shall be capable of carrying 200 feet of 1.75" Ponn Conquest double jacket hose. One (1) compartment shall be capable of carrying 200 feet of 2.5" Ponn Conquest double jacket hose. The hose compartments shall be located vertically with the two 1.75" beds as the top two and the 2.5" bed on the bottom. Scuff plates shall be provided at the sides and bottom of each opening on both sides. Speedlay flooring shall consist of removable perforated brushed aluminum.

There shall be one (1) removable access panel installed in the back wall of the middle speedlay for pump access. The panel shall be held in place with recessed lift-and-turn latches.

Does your bid comply with this requirement?

YES ( )

NO ( )

### 8.30 NOT USED

**8.31 Pump Compartment:** The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in four(4) points pattern to allow for chassis frame twist. The pump compartment, pump, plumbing and gauge panel shall be removable from the chassis in a single assembly.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.32 Pump Mounting:** The pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.33 Pump Control Panels - Top Mount Controls (FOR CUSTOM FIRE PUMPERS ONLY):** or compartments shall be formed of .125 inch thick aluminum. They shall be of all welded construction. They shall be welded the full length of their seams and be completely water tight. Spot welded seams are not acceptable. The floor of the exterior compartments shall be of the sweep out or flush style. Compartments that have a "lip" at the floor line are not acceptable.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.34 Pump Mounting(FOR CUSTOM FIRE PUMPER'S ONLY):** The pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage the fire pump.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.35 Pump Control Panels - Top Mount Controls:** All pump controls and gauges shall be located at the top mount operator's position. The control panels shall be full width of the apparatus. The gauge and control panels shall be two (2) separate panels for ease of maintenance. The upper gauge panel shall be hinged at the bottom with a full length stainless steel hinge. The fasteners used to hold the panel in the upright position shall be quarter turn type. There shall be two (2) vinyl covered cables to support the gauge panel in the drop down position. Polished stainless steel trim collars shall be installed around all inlets and outlets. All controls shall have stainless steel rods with a minimum diameter of .50" inches. The control rods shall be quarter turn locking type. Color coded identification tags for the discharge controls shall be located directly above the control handles and recessed within the same casting as the control handle guide. All in line pressure gauges shall be mounted in individual chrome plated castings with the color-coded identification tags recessed in the casting below the gauge. All remaining color-coded identification tags shall be mounted on the pump panel in chrome plated bezels. Mounting of the casting and identification bezels shall be done with a threaded peg cast on the backside of the bezels. All panel gauges and discharges shall be equipped with color coded tags. The control panel, gauge panels, and side pump panels shall be constructed of brushed stainless steel. A polished aluminum trim molding shall be provided on both sides of the pump panel. The left and right side pump panels shall be removable and fastened with lift and turn fasteners for ease of service.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.36 Pump Panel Gauges and Controls:** The following shall be provided on the pump and gauge panels in a neat and orderly fashion:

1. Voltmeter with two (2) stage low or high voltage warning indicator light (red) and audible alarm.
2. Two (2) stage low fuel warning indicator light (red) with audible.
3. Engine oil pressure gauge with warning indicator light (Red) and audible warning.
4. Engine water temperature gauge with warning indicator light (Red) and audible warning.
5. Tachometer, Electric.
6. Half engine speed counter.
7. Master pump drain control.
8. Air outlet with female adapter.
9. Light/Alarm pump overhead indicators

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.37 Gauges, Vacuum, and Pressure:** The pump vacuum and pressure gauges shall be Class - One Silicone filled gauges or equal. The gauges shall be a minimum of 6.00" inches in diameter and shall have white faces with black lettering, with a pressure range of 0-30" inches (Hg) and 0-600psi. The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**8.38 Pressure Gauges:** The individual "line" pressure gauges for the discharges shall be silicone filled, a minimum of 2.50" inches in diameter and have white faces with black lettering. Gauges to be compound type with a vacuum and pressure range of 0-30" inches (Hg) and 0-400psi respectively. The individual pressure gauge shall be installed as close to the outlet control as practical. Gauge pressures shall be measured within 4" of the discharge outlet to ensure accurate pressure readings.

Does your bid comply with this requirement?

YES ( )

NO ( )

**9.0 Class A and B Foam System:** A Foam Pro 3010D or equal foam proportioning system shall be provided that is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class "A" & "B" foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation shall be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system shall automatically balance and proportion foam solution at rates from 0.1% to 9.9% regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.

The design of the system shall allow operation from draft, hydrant, or relay operation. This shall provide a versatile system to meet the demands at a fire scene. The system shall have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 250 PSI.

160 GPM @ 6%  
333 GPM @ 3%  
1000 GPM @ 1%

Class A foam setting in .1 % increments from .1% to 1%. Typical settings of 1%, .5% and .3% (Maximum capacity shall be limited to the plumbing and water pump capacity)

The system shall be equipped with a digital electronic control display located on the pump operators panel. Push button controls shall be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes (automatic, manual, draft, calibration, or flush).

The percent of injection shall have presets for class A and class B foam. These presets shall be capable of being changed if desired. The percent of injection shall be able to be easily changed at the scene to adjust to changing demands.

The control display shall direct a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor shall compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve shall be installed in the plumbing to prevent foam from contaminating the water pump.

The control head shall display a warning message when the foam tank in use is below a quarter tank.

The foam concentrate pump shall be powered by a hydraulic drive system, which is automatically activated, whenever the vehicle water pump is engaged. Hydraulic oil cooler shall be provided to automatically prevent overheating of the hydraulic oil, which is detrimental to system components. The oil/water cooler shall be designed to allow continuous system operation without allowing hydraulic oil temperature to exceed the oil specifications.

The hydraulic oil reservoir shall be of sufficient size to minimize foaming and be located to facilitate checking oil level or adding oil without spillage or the need to remove access panels.

The foam concentrate pump shall be by the hydraulic motor. The pump shall be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. A relief system shall be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump

The foam concentrate pump shall have minimum capacity for 10 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system shall deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump shall be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails.

An external foam pick-up shall be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up shall be designed to allow continued operation after the on-board foam tank is empty. The external foam pick-up shall be designed to allow use with training foam or colored water for training purposes.

The external foam pick-up shall be one (1) - 1.00" female swivel connection with chrome-plated plug and chain shall be located on the driver's side pump panel. A check valve shall be installed in the external connection. A 1.00" flexible tube with 1.00" male NST thread shall be provided and shipped loose. A strainer with stainless steel screen shall be installed ahead of the foam concentrate pump inlet port. The strainer shall be easily accessible for cleaning.

The foam system shall be plumbed to four discharges. The discharges capable of dispensing foam shall be the two (2) 1 ¾" speedlays, (1) 2 ½" speedlay, and the and rear passenger side 2 ½" discharge.

An electric valve shall be used for the foam supply valve. The foam supply valve shall be controlled at the foam system control head for ease of operation. The supply valve shall be electric, remote controlled, to eliminate air pockets in the foam tank supply hose.

The system shall be designed such that a flush mode shall be provided to allow the system to flush all foam concentrate with clear water. The flush circuit control logic shall ensure the foam tank supply valve is closed prior to opening the flush valve. The flush valve shall be operated at the foam system control head for ease of operation. The valve shall be electrically controlled and located as close to the foam tank supply valve as possible. A manual flush drain valve shall be labeled and located under the driver's side running board.

A demonstration shall be provided at the manufacturer, on the operation of the foam system. In addition in-field training of operations and maintenance shall be provided.

This demonstration at the factory and in-field training shall include:

- Review of the foam system manual, highlighting key areas.
- A walk around review of the system components, on the finished truck.
- A "hands on" foam system start-up and foam discharge session.
- Instructions on the use of the manual overrides.
- The proper way to shutdown and flush the foam system.

The cost of training and materials will be borne by the vendor.

Does your bid comply with this requirement?

YES ( )

NO ( )

**9.1 Foam Cell:** The foam tank shall be an integral portion of the polypropylene water tank. The cell shall have a capacity of 40 gallons of foam with the intended use of Class "B" foam. The brand of foam stored in this tank shall be TBD. The foam cell shall not reduce the capacity of the water tank. The foam cell shall have a screen in the fill dome and a breather in the lid.

The foam tank drain shall be a 1.00" drain valve located inside the pump compartment accessible through a door on the passenger's side pump panel.

Does your bid comply with this requirement?

YES ( )

NO ( )

**9.2 Water And Foam Level Gauges:** There shall be an electric water level indicator provided on the gauge panel that registers by means of individual lights at the following positions and colors: Green - Full, Amber - 3/4, Amber - 1/2, Red - 1/4, Red - Empty. There shall be one gauge for the main water tank and a gauge for the foam tank. To further alert the pump operator, the empty light must start flashing when the water level drops below the 1/4 mark. The water level indicator shall utilize switches that have no electrical components coming in contact with tank water. The indicator shall use twist lock moisture proof connections for corrosion protection and easier servicing. The indicator lights to be installed a chromed bezel that matches the style used for the discharge controls and pressure gauges.

A water level gauge system shall be provided at side of pump module or body each side. Each shall be provided with four (4) Whelen, Model 500, LED lights with flanges. The total quantity of the water level gauge systems to be provided shall be two (2), one each side of upper body or pump module.

The lights shall be mounted and indicate the following:

- \* top light with green lens - water level full
- \* next light with amber lens - water level 3/4 full
- \* next light with amber lens - water level 1/2 full
- \* bottom light with red lens - water level 1/4 full when on solid and shall flash when empty.

The above system shall function similar to the standard five (5) lights at the pump panel. The system shall be interlocked to the pump in gear circuit, therefore, allowing the lights to be activated only when the pump is put into gear.

Does your bid comply with this requirement?

YES ( )

NO ( )

**9.3 Light Shield:** The pump panel controls and gauges shall be illuminated by a minimum of four (4) incandescent lights installed under a polished stainless steel, or bright dipped anodized aluminum light shield. The two (2) center pump panel lights shall be actuated when the pump is shifted into gear inside the cab. This light shall provide the operator with some illumination while first approaching the pump panel. The remaining lights shall be operated from a watertight switch on the pump panel. Fixture type switches to activate the lights will not be acceptable. Each light shall have a .125" inch hole in the lens to prevent moisture retention.

Two (2) additional step/light shield shall be provided above passenger's and driver's side pump panel. The pump panel shall be illuminated by a minimum of three (3) incandescent lights installed under a bright aluminum tread plate step. The steps shall have a minimum of an 8.00" inches stepping surface and it shall be properly reinforced to support 500 pounds of weight. The lights shall be operated from a watertight switch on the pump panel. Each light shall have a .125" inch hole in the lens to prevent moisture retention.

Does your bid comply with this requirement?

YES ( )

NO ( )

**9.4 Exterior Electrical:** All 12 volt electrical equipment installed by the apparatus manufacturer, shall conform to Article 551 of the National Electrical Code, Federal Motor Vehicle Safety Standards, and all Modern Automotive Practices. All wire insulation is to be high temperature cross-linked type. Wiring to be run in loom or conduit where exposed and have grommets where wire passes through sheet metal or bulkheads. Auto reset circuit breakers shall be provided which conform to SAE Standards. All wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" inch intervals.

Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment shall be installed utilizing the following guidelines:

1. All holes made in the roof shall have grommets inserted and caulked with silicon, rope caulked (dum dum) is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.
2. Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it. Exposed area is defined as any location outside of the cab or body.
3. Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also a coil of wire must be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.
4. Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).
5. All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.
6. All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. All emergency light switches shall be mounted on a separate panel installed in the overhead position. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches are to be "Rocker" type with an internal indicator light to show when switch is energized. All switches to be property identified and mounted in a removable panel for ease in servicing. Identification of the switches shall be done by either printing or etching on the switch panel. The switches and identification shall be illuminated. All lights and reflectors required to comply with Federal Motor Vehicle Safety Standard # 108 must be furnished. Rear identification lights to be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartment. All 120/240 volt electrical systems shall be tested as follows: Wiring and associated receptacles shall be subjected to a 1 minute, 900 volt dielectric voltage withstand test with any switches in the circuit(s) closed between live parts, including neutral and the vehicle frame. This test shall be conducted after all body work has been completed. Electrical polarity checks shall be made of permanently wired equipment and receptacles to determine that connections have been properly connected and in working order. The results of the tests shall be recorded and provided to the purchaser at time of delivery.

Does your bid comply with this requirement?

YES ( )

NO ( )

### 9.5 Heating Criteria:

The heater provided shall be an 40,000 BTU heater in the cab located below the right side cab dash. The heater/defroster ventilation shall be built into the design of the cab dash instrument panel. The heater ducts shall be vented in a manner to provide heat directed towards the officer and the driver. The defroster ducts shall be designed to provide maximum defrosting capabilities for the windshield. Adjustable defroster louvers shall be provided for directing air flow to the side cab door windows. Heater defroster controls are to be located on the cab dash within easy reach of the driver.

Does your bid comply with this requirement?

YES ( )

NO ( )

### 10.00 Intercom System:

**10.1** One (1) complete Sigtronic intercom system, Model US-67S, to have five (5) headsets, two(2) SE-40RPTT headsets in front and three(3) SE-40 headset in the rear. There shall be three (3) 4-Cond. Jack for RPTT Headsets, two (2) in the cab in the front, and one(1) at the pump panel. The intercom shall have the capability of

being able to transmit in the cab front position and pump panel position on the radio. There shall be two (2) additional jack model 800121 with splash cover in the rear of the apparatus on the left and right side high-side compartment for the back up position. This system will require a Sigtronics Emergency radio switcher. All exterior jacks shall be the weatherproof type. All connecting cables shall be supplied. The unit's talk switches and control panels shall be flush mounted and when installed. This System shall be connected to the Motorola Spectra C9 Control head system, model 900086 adapter.

Two antenna mounting bases, Model MATM with 17 feet of coax cable and weatherproof cap, shall be provided for two way radios. The mounts shall be located cab roof on the cab roof just to the rear of the front cab seats. The cable shall be routed to the officer side seat box with enough cable to be to routed to the instrument panel if needed.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**10.2 Siren - Public Address System:**

The apparatus shall be equipped with a Whelen WS-295 Electronic Siren/Public Address System with noise canceling microphone. The speaker system shall be two (2) Cast Products model SA2400 series 100 watt speakers recessed in the vehicle's front bumper. There is to be no exception to this requirement as this product is available to all bidders. This Agency will not accept ANY grille installed speaker system due to radiator air flow restriction. **NO EXCEPTION.**

The siren head shall be located on a swivel bracket mounted on the head liner so that it is accessible to both the driver and officer. The swivel bracket shall be capable of rotating a minimum of 108 degrees. The electronic siren shall be controlled on the siren head and by the horn button in the steering wheel.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**10.3 Mechanical Siren:** A Federal Q2B Siren shall be provided. A siren brake button shall be installed on the switch panel next to the officer. The mechanical siren shall be mounted on the front bumper on the left side. The siren shall be supported by the bumper framework. The mechanical siren shall be actuated by a foot switch on the officer's side and by the horn button in the steering wheel. The driver shall have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel next to the driver.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**10.4 Backup Vehicle Camera System (FOR QUINT AERIAL APPARATUS ONLY):** The vehicle will have an onboard mounted backup camera system with a screen mounted so the driver has full view of the rear of the vehicle. This will reduce back up accidents. The system should be Intec Model CVM450LPP or equal.

Does your bid comply with this requirement?  
YES ( )  
NO ( )

**11.0 ADDITIONAL SYSTEMS, EQUIPMENT, ACCESSORIES, AND SUPPLIES.**

**11.1 Standard Mandatory Miscellaneous Equipment:**

Unless otherwise precluded elsewhere in this specification, the apparatus shall be equipped with but not limited to the following:

**11.2 NOT USED.**

**11.3** The apparatus manufacturer shall supply the weight rating nameplate as required by NFPA 1901, paragraph 3-1.2. In addition the Bidder shall include in the Delivery Manual a certified weight scale receipt showing the final finished weight of the vehicle and its "permanent" equipment as specified in this specification.

Does your bid comply with this requirement?

YES ( )

NO ( )

**11.4 Back-up Alarm:**

There shall be an audible warning device system provided. This system shall be a solid-state electronic device which activates when the vehicle is shifted into and/or moving in reverse. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum 5 dba above surround environmental noise levels. This alarm shall meet the requirements of NFPA 1901, paragraph 3-3.5.8.

Does your bid comply with this requirement?

YES ( )

NO ( )

**11.5 Markings, Data Plates, Warranty Notice, Etc:**

The manufacturer's caution plates and identification plates shall be conspicuously installed for all equipment furnished requiring such notices.

Does your bid comply with this requirement?

YES ( )

NO ( )

**11.6 Required Manuals, and Additional Equipment:** The following items shall be provided on the delivery of the apparatus:

The following manuals are required to correspond to the type and model of apparatus being delivered. See the attached list below:

1. 2- Pump Manual covering operation, maintenance, and parts
2. 2- Body Manual covering operation, maintenance, and parts
3. 2- Parts description in manual to be of expanded drawing type, showing all component parts.

Two (2) compact disc (CD) shall also be provided that shall include all of the information from the above manual.

The manual shall contain the following:

- Job number
- Part numbers with full descriptions
- Table of contents
- Parts section sorted in functional groups reflecting a major system, component, or assembly
- Parts section sorted in alphabetical order
- Instructions on how to locate a part

The manual shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.

The service parts information included in this manual shall also be available on the factory website. The website shall offer additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

4. 2- Chassis Service Manual
5. 2- Chassis Operation Manual
6. 2- First level, Maintenance video training tape for chassis and fire pump.
7. 2- Electrical-wiring diagrams for specifically prepared for the model of chassis and body provided.
8. 2- generating system, operation, maintenance, and parts
9. 2- Engine Manual

10. 2- Transmission Manual
11. 2- Suspension Manual
12. 2- Manufacturer's Air Conditioning unit, Operation, Maintenance, and Parts manual

**11.6.1** The following equipment shall be provided, placed and mounted on the apparatus by the apparatus manufacturer. This list of equipment and placement shall be agreed on by the city at the preconstruction conference/visit. The attached listed below shall be provided on each unit:

### **FOR CUSTOM FIRE PUMPERS ONLY**

#### **Ladders**

1. 24' Foot two (2) section, Series ALP-200-24
2. 14' Foot one (1) section, Series ALP-100-14
3. 10' Foot Folding Section, Series ALP-080-10

#### **Pike Poles**

1. 8' Foot Firehooks APH-8'
2. 6' Foot Firehooks UH-6'
3. 6' Foot Firehooks RH-6'

#### **Shovels**

1. Nupla, Round Nose, Model RP2L 48" inch Handle
2. Nupla, Square Nose, Model SPD6 48" inch Handle
3. Nupla, Scoop Nose, Model AGS14 27" inch Handle with D Grip

#### **Hydraulic Extrication Equipment**

- 1- TNT Rescue S-100-28 Hydraulic Spreader
- 1- TNT Rescue C-25 Hydraulic Cutter
- 1- TLS 50 Telescoping Ram
- 2- TNT Rescue EDR-100-E-B 100' Hose Reels coupled @ 70' (1 Red, 1 Black) (TNT Hose only)
- 1- Rescue 42 TeleCribbing Stabilization System Part # Truck Kit TC 6002

#### **Nozzles, adaptors, appliances, etc.**

- 1- Elkhart 8297-51 Stinger 2.0 w/ 5" Storz Base
- 1- Elkhart ST-194 Stack Tips w/ 282A Stream Shaper
- 1- Elkhart SM-1250 @ 75
- 1- Elkhart 8289EX Pipe for Stinger 2.0 w/ 8298 EX – MB mounting bracket
- 1- Elkhart B-100 2.5" f x (2)1.5" m gated wye
- 1- Elkhart B-100A gated wye with short handles and pressure gauge w/ yellow bumper
- 1- Elkhart BG-104A 2.5" f x (1)2.5" m (2)1.5" m water thief with long handles and pressure gauge
- 1- B-96A 2.5" quarter turn hydrant ball valve
- 3- B-275-GAT w/ built in 15/16" SB w/ 4000-14 150@50 Chief Tips & 281A 1.5" short stream shaper w/ knurled edge (KE) (3ea.- Shutoffs w/ built in sooth bore, Fog Tips, Stream Shapers)
- 2- B-275-GAT w/ built in 1" SB w/ 4000-14 150@50 Chief Tip & 281A stream shaper w/ KE
- 1- DB-275-GAT w/ short 2.5" inlet & built in 1 1/4" SB w/ 4000-24 250@50 & 281A 2.5" short stream shaper w/ KE  
\*(Colors for all nozzle bumpers, pistol grips, and shutoffs to be specified)
- 1- Elkhart B-278-L 2.5" playpipe w/ ST-185AIFD Indy stack tips 1 1/8", 1 1/4" & 281A short stream shaper w/ rocker lugs
- 2- Elkhart A327A 2.5" f x 1.5" m Elk-O-Lite Reducers
- 4- Elkhart F327A 2.5" Double Female Elk-O-Lite Adaptors
- 4- Elkhart M327A 2.5" Double Male Elk-O-Lite Adaptors
- 1- Elkhart 246S for 4000-14 Chief Tip Foam Tube
- 2- Elkhart 470 adj. Hydrant wrench w/ bracket and 2 - 2.5" spanners
- 2- 5" spanners with holding bracket (2 pairs – 4 total)
- 1- 5" storz to 4" storz swivel adaptor

**Hose**

- 1060' Snap-Tite HFX (1000'-Bed, 30'-ea. Side Intake)
  - 1000' Ponn Conquest 2.5"(600'-Bed, 200'-Pre-Connect, 50'-Hi-Rise, 50'-ea. Side Intake, 50'Roll)
  - 700' Ponn Conquest 1.75"(200'-ea. Pre-Connect, 100',Trashline, 100'-ea. Hi-Rise Pack)
- (\*All hose colors to be specified by the City of Fort Lauderdale)

**Misc. Hand Tools, etc.**

- 2- Firehooks Unlimited 8lb. Force Axes
- 2- Firehooks Unlimited 30" Pro-Bars
- 1- Firehooks Unlimited 6lb. Truckmans Axe (TR-28)
- 1- Firehooks Unlimited 8lb. Sledge/Maul (8-M28)
- 1- Firehooks Unlimited Irons Sling / Mate Strap
- 1- Firehooks Unlimited Extinguisher Shoulder / Carrying Strap
- 1- Fire Hooks Bolt Cutters BC36 36" inch
- 1- Quick-Kut Air Hammer Kit 89501
- 1- Ziamatic SAC44 Folding wheel chocks with mounting brackets
- 4- Kohler "Responder" rechargeable lights with charging bank
- 4- Streamlight Fire Vulcan flashlights with chargers
- 2- Gemtor Hose Rope Tools
- 1- Amerex #A411 ABC Dry Chem 20 LBS., with bracket
- 1- Amerex #332 CO2 20 LBS., with bracket
- 1- Amerex #240 Pressurized Water, with bracket
- 1- Lowell #52 15" inch Ratch Handle Hydrant Wrench
- 4- Saftey Flag CTS28 Traffic Cones
- 1- Super-Vac 16" electric Smoke Ejector
- 6- Misc. Pigtailed to be specified
- 2- Fold-A-Tank 12' Foot x 18' Foot Salvage Covers
- 1- Maxi-Flex 6" inch Barrel Strainer
- 1- Maxi-Flex 6" inch x 4 ½" inch Adapter
- 1- Fire Hooks CM-2 Rubber Mallet
- 1- Fire Hooks Elevator Keys
- 1- 11amp Milwaukee Sawzall w/ quick blade release (w/ supply of blades - 12 ea. – 9" & 12" Milwaukee Torch and Axe blades = 48 blades total)
- 1- Glassmaster Windshield Saw
- 1- K-12FD Rescue Saw Kit: In addition to the K-12FD Saw; the kit provides the following accessories and materials:
  - 2 carbide tip blades; (Firehooks UL 24-tooth chopper blades) 4 rescue steel/concrete blades; safety gas can; hearing and eye protection; spare belt; air filter oil; 2 cycle oil; gasoline stabilizer; combo wrench/screwdriver; manual and space saver box.
- 1-Padlock Holder (vice grip w/ 18" ext) (Firehooks UL)

**Electronics**

- 1- Complete set of Motorola Communication Equipment including radio system, MDT system, and portable radio battery charger. (All equipment to be specified by the City of Fort Lauderdale)
- 2- MSA Model #10040938 Evolution 5000 Thermal Imaging Cameras, truck mounted charger, quick-temp, heat seeker, 2 lithium batteries

**FOR QUINT AERIAL APPARATUS ONLY****Hydraulic Extrication Equipment**

- 1- TNT BT 3.0 Gas Bantam Power Unit
- 1 – TNT ARP-RG Air Pump w/ Regulator
- 1 – Complete set of high-pressure lift bags to be specified.
- 1- set portable "Pro Pack" Oxy-Acetylene Cutting Torches.
- 2 – 30' TNT hydraulic hoses (1-red, 1-black)

**Nozzles, adaptors, appliances, etc.**

- 1- Elkhart ST195 stack tip w/ 284A stream shaper (for aerial monitor)
- 1- Elkhart B-100 2.5" f x (2)1.5" m gated wye
- 1- Elkhart B-100A gated wye with short handles and pressure gauge w/ yellow bumper
- 1- Elkhart BG-104A 2.5" f x (1)2.5" m (2)1.5" m water thief with long handles and pressure gauge
- 1- B-96A 2.5" quarter turn hydrant ball valve
- 3- B-275-GAT w/ built in 1 1/2" SB w/ 4000-14 [150@50](#) Chief Tips & 281A 1.5" short stream shaper w/ knurled edge (KE) (3ea.- Shutoffs w/ built in sooth bore, Fog Tips, Stream Shapers)
- 2- B-275-GAT w/ built in 1" SB w/ 4000-14 [150@50](#) Chief Tip & 281A stream shaper w/ KE
- 1- DB-275-GAT w/ short 2.5" inlet & built in 1 1/4" SB w/ 4000-24 [250@50](#) & 281A 2.5" short stream shaper w/ KE
- \*(Colors for all nozzle bumpers, pistol grips, and shutoffs to be specified)
- 1- Elkhart B-278-L 2.5" playpipe w/ ST-185AIFD Indy stack tips 1 1/8", 1 1/4" & 281A short stream shaper w/ rocker lugs
- 2- Elkhart A327A 2.5" f x 1.5" m Elk-O-Lite Reducers
- 4- Elkhart F327A 2.5" Double Female Elk-O-Lite Adaptors
- 4- Elkhart M327A 2.5" Double Male Elk-O-Lite Adaptors
- 1- Elkhart 246S for 4000-14 Chief Tip Foam Tube
- 2- Elkhart 470 adj. Hydrant wrench w/ bracket and 2 - 2.5" spanners
- 2- 5" spanners with holding bracket (2 pairs – 4 total)
- 1- 5" storz to 4" storz swivel adaptor

**Hose**

- 1060' Snap-Tite HFX 1000 'Bed, 30'-ea. Side Intake)
- 400' Ponn Conquest 2.5"(600' bed 200'-Pre-Connect, 50'-Hi-Rise, 50'-ea. Side Intake, 50'Roll)
- 500' Ponn Conquest 1.75"(200'-ea. Pre-Connect, 100' trashline, 100' each Hi-Rise Pack)

(\*All hose colors to be specified by the City of Fort Lauderdale)

**Misc. Hand Tools, etc.**

- 3- Firehooks Unlimited 8lb. Force Axes
- 3- Firehooks Unlimited 30" Pro-Bars (2 of the bars should have the welded rings)
- 1- Firehooks Unlimited 6lb. Truckmans Axe (TR-28)
- 1- Firehooks Unlimited 8lb. Sledge/Maul (8-M28)
- 1- Firehooks Unlimited Irons Sling / Mate Strap
- 1- Firehooks Unlimited Extinguisher Shoulder / Carrying Strap
- 1- Fire Hooks Bolt Cutters BC36 36" inch
- 1- Quick-Kut Air Hammer Kit 89501
- 1- Ziamatic SAC44 Folding wheel chocks with mounting brackets
- 4- Kohler "Responder" rechargeable lights with charging bank
- 4- Streamlight Fire Vulcan flashlights with chargers
- 2- Gemtor Hose Rope Tools
- 1- Amerex #A411 ABC Dry Chem 20 LBS., with bracket
- 1- Amerex #332 CO2 20 LBS., with bracket
- 1- Amerex #240 Pressurized Water, with bracket and shoulder strap
- 1- Lowell #52 15" inch Ratch Handle Hydrant Wrench
- 4- Saftey Flag CTS28 Traffic Cones
- 1- Super-Vac 16" electric Smoke Ejector
- 6- Misc. Pigtales to be specified
- 6- Fold-A-Tank 12' Foot x 18' Foot Salvage Covers
- 4 – Mattress Hooks
- 1- Fire Hooks CM-2 Rubber Mallet
- 1- Fire Hooks Elevator Keys
- 2-11amp Milwaukee Sawzall w/ quick blade release (w/ supply of blades - 12 ea. – 9" & 12" Milwaukee Torch and Axe blades = 48 blades total) If available with a twist lock cord.
- 1- Glassmaster Windshield Saw
- 1 – Hydra Ram (Firehooks UL)
- 1 – K-Tool Unit (Firehooks UL)
- 1 - Rex Tool (A type lock puller) (Firehooks UL)

- 1 – Duckbill Padlock Breaker (Firehooks UL)
- 2 – Partner K-12FD rescue saws with a complete assortment of blades and accessories to be specified
- 1 - Stainless Diamond Plate storage box for a K-12 saw to be mounted in a location to be specified on the external, topside of the apparatus
- 1 – Padlock Holder (vice grip w/ 18” ext) (Firehooks UL)
- 1 – Cutters Edge Vent Saw (chainsaw) with Carbide tip chain and complete accessory kit and spare chain
- 1- Certified Ladder Anchor Bar

### **Electronics**

1 - Complete set of Motorola Communication Equipment including radio system, MDT system, and portable radio battery charger. (All equipment to be specified by the City of Fort Lauderdale) Shall meet the requirements of paragraph 3.14.1 of Federal Specification KKK-A\_1822. The bidder supplied Motorola radio MCS2000II 15W 800 MHZ, dual head <M01HX/H37/H260/B123/B800 shall be installed behind the cab seat also. Power shall be supplied for the radio. Also to include a bidder supplied AdvanceTec conditioning charger s/n 3059 with two MTS adapter plates and two XTS 5000 adapter plates. The charger is to be hard wired into a space not to disturb any other equipment, preferably in the backside of the engine cab.

2 - Hand-Held “mini” Microbolometer Thermal Imaging Cameras to be specified

Does your bid comply with this requirement?

YES ( )

NO ( )

### **FOR BOTH TYPE OF VEHICLES**

#### **Tool Box**

- 1- Tool Box (model to be specified)
  - 1- 10” Vice Grip
  - 1 –12” Hacksaw w/ Blades
  - 1- 12” Adjustable Crescent Wrench
  - 1- Double Action Tin Snip
  - 1- 4” Phillips Screw Driver
  - 1- 8” Phillips Screw Driver
  - 1- 6” Slotted Screw Driver
  - 1- 12” Slotted Screw Driver
  - 1- Spring Loaded Center Punch
  - 1- Can Spray Lubricant
  - 1- 6’ Air Hose w/ Air Chuck
- (\*All tools must be Craftsman)

#### **Ropes, equipment, hardware**

##### **Lifeline**

- 1 - Rope bag with pocket for hardware - CMC Medium Rope/Equipment bag - Item # 431203 (orange for lifeline)
- 1 - 150' of 1/2" static kernmantle rope - CMC Rescue Static Lifeline, Item # 273220 (orange for lifeline)
- 2 - FD cotton hose edge protectors (no cost - existing supply)
- 1 - 10' anchor strap - CMC ProSeries X-Large yellow
- 4 - SMC Large carabiners - NFPA Large Steel, Item # 321000 brite 1.20" gate opening
- 3 - SMC X-Large carabiners - NFPA X-Large Steel, Item # 320000 brite 1.45" gate opening
- 2 - 10' pieces of web (blue) - CMC Rescue tubular webbing
- 2 - 18' pieces of web (orange) - CMC Rescue tubular webbing
- 4 - Single sheath pulley
- 4 – Class II Rappelling Harnesses (2 med., 2 lg.)

##### **Utility Line**

- 1 – 150’ ½” static kernmantle rope – CMC Rescue Static Lifeline, item # 273220 (yellow for utility line)
- 1 – CMC rope bag model # 430201 (yellow for utility line)
- 1- Water Rescue Rope w/ Mesh Bag and 1- Personal Floatation Device (Torpedo)

## 12.0 FOUR SECTION 100 FOOT AERIAL LADDER (FOR QUINT AERIAL APPARATUS ONLY)

**12.1** There shall be a rear mounted 100 foot telescoping/elevating four section Quint/Ladder. The aerial unit shall be capable of operating safely in any plane up to 3.5 degrees out of level at full capacity. These specification detail construction standards which are in no way intended to limit competition. If a manufacturer uses a different construction method or material to achieve compliance it may be considered. All difference or variation must be clearly described in the section entitled "Exceptions to Specifications". The ladder is to have a minimum 2:1 design safety factor based upon the live load of the ladder and the dead load of the ladder combined. Unit to have a 1.5:1 stability factor that is in compliance with the Occupational Safety and Health Act (OSHA) and the American National Standards Institute (ANSI). These capabilities are to be in the unsupported configuration. All welding must be in compliance with the American Welding Society standard D1.1. All welding personnel must be certified under AWS welding codes.

Does your bid comply with this requirement?

YES ( )

NO ( )

### 12.2 LADDER CONSTRUCTION:

The ladder shall be comprised of Four (4) sections and shall extend to a nominal height of 100 feet above the ground at 75 degrees. The ladder shall have the capability to support a minimum of 750 pounds at the tip in the unsupported configuration, based upon 360 degree rotation, up to full extension and from -5 degrees to +75 degrees while flowing 1250 GPM 90 degrees to the center line of the ladder in a 40 MPH wind condition. Each section must be trussed diagonally, vertically, and horizontally for extra rigidity. All ladder rungs are to be round and welded to each section in two places with "K" bracing for torsional rigidity.

The inside width of the ladder sections shall be approximately:

- Base section 39.00"
- Second section 32.00"
- Mid-section 26.00"
- Fly section 22.00"

The height of the handrails shall be approximately:

- Base section 28.00"
- Second section 24.00"
- Mid section 22.00"
- Fly section 19.00"

The overall height of the vehicle shall not exceed 12 feet. Each rung shall be covered with a secure, heavy duty, deep serrated rubber sheathing. The sheathing shall be clamped to each rung with an unpainted stainless steel clamp. The end of the fly section shall be constructed in a manner that aids in climbing off from the ladder. The egress section shall be of bolted on design for ease of replacement.

A detachable lifting device shall be attached to the end of the fly section of the aerial ladder for rope rescue operations. Two attachment points, one each side, shall be provided on the end of the base rail of the fly section. A steel attachment bar shall be provided which will connect to the two attachment points and shall be pinned into place. An attachment point for rope or stokes harnesses shall be located at the center of the attachment bar for equal distribution of weight.

**NOTE: PROPOSER SHALL SUBMIT A MANUFACTURERS LOAD CHART WITH THEIR PROPOSAL:**

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.3 TORQUE BOX ASSEMBLY:**

A torque box assembly shall be installed on the chassis frame constructed of steel. This torque box assembly shall also be designed to accommodate the rear storage of ground ladders. The stabilizer box beam sleeves are to be an integral part of the torque box assembly. The torque box shall transfer all aerial loads onto the stabilizers, thus preventing damage of the chassis frame or body. The torque box shall be bolted to the chassis frame with .75" SAE grade 8 bolts. An open base structure constructed of steel square tubing shall be welded to the rear of the torque box to support the turntable mounting plate.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.4 TURNTABLE:**

A sturdy steel tubing support structure shall be welded to the turntable bearing plate to support the turntable flooring. The turntable shall have a bright aluminum diamond plate floor with an 1.50" lip around the perimeter covering the support framework underneath. Morton Case, or Gator Grip, inserts shall be provided in all walking and standing surfaces of the turntable for added safety. The turntable shall be lighted by three work lights activated by the aerial master switch. The turntable shall measure approximately 96.00" wide x 80.00" long. Three (3) 42" high rubber covered handrails shall be provided, one (1) each side and one (1) at the rear.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.5 LADDER TRAVEL SUPPORT:**

A heavy-duty ladder rest constructed of steel shall be constructed for support of the ladder in the travel position. The ladder support shall be mounted directly behind the cab as close to the center of the front axle as possible. On the base section of the ladder a stainless steel scuff plate shall be provided where the ladder comes in contact with the travel support. A light shall be mounted on the boom travel support to help guide the aerial device into position during night operation.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.6 LADDER CRADLE INTERLOCK SYSTEM:**

An interlock system shall be provided which prevents the lifting of the aerial device from the nested position until the operator places all the stabilizers in a load supporting configuration. A switch shall be installed at the cradle to prevent operation of the stabilizers once the aerial has been elevated from the nested position.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.7 ELEVATION SYSTEM:**

Two double acting lift cylinders shall be utilized to provide smooth precise elevation from 5 degrees below horizontal to 75 degrees above horizontal. The cylinders shall be attached to each side of the base section. The cylinders shall have a 6.00" internal diameter (bore), 4.50" diameter rod. Rods to be chrome plated to reduce seal wear and provide smooth operation. Spherical bushings shall be provided at each end of cylinder to reduce pin wear. The lift cylinders shall be equipped with integral holding valves located on the cylinder to prevent the unit from descending should a charged line be severed at any point within the hydraulic system and to maintain the ladder in the bedded position during road travel. The main control valve shall be regulated internally so as not to exert excessive pressure when bedding the ladder in the boom support.

Both raising and lowering functions are to be influenced by flow compensation that maintains ladder tip speed to within approximately 10% regardless of load, angle or extension. Ladder tip speed is to be automatically decelerated above 70 degrees to reduce "tip lash".

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.8 EXTENSION/RETRACTION SYSTEM:**

A hydraulically powered extension and retraction system shall be provided through dual hydraulic cylinders and cables. Each set to be capable of operating the ladder in the event of a failure to the other. Single cylinder retraction systems will not be acceptable. The extension cylinders shall have 3.75" internal diameter bore with 1.75" rod. The cylinder rods to be chrome plated for smooth operation and to reduce wear. These cylinders shall also be equipped with integral holding valves to prevent the unit from retracting should a charged line be severed at any point within the hydraulic system. The extension and retraction shall be internally limited within the cylinders, eliminating excess strain on cables, sheaves and the ladder structure. Each of the cylinders, cables, and sheave assemblies shall be completely independent of the other, so as to provide a safety factor wherein a failure of one assembly will not affect the function and operation of the other. The extension cylinders are to be equipped with counter balance valves to synchronize the cylinders for smoother operation. All cables used shall have a minimum 5:1 safety factor. Extension indicator shall be provided on the inside and outside of the upper ladder handrail.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.9 LADDER SLIDE MECHANISM:**

UHMW plastic wear pads are used between the telescoping sections for maximum weight distribution, strength and smoothness of operation.

Adjustment screws shall be provided on the wear pads to permit proper side alignment.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.10 ROTATION SYSTEM:**

A 40.25" external tooth, monorace swing circle bearing shall be used for the rotation system and shall provide 360 degree continuous rotation. To insure proper bearing installation, both the open base bearing plate and the turntable bearing plate shall be milled surfaces. The bearing shall be bolted to the turntable and the base plate by a minimum of (36) grade 8, .625" bolts. A hydraulically driven planetary gear box with a drive speed reducer shall be used to provide infinite and minute rotation control throughout the entire rotational travel. A spring applied, hydraulically released disc type swing brake shall be furnished to provide positive braking of the turntable assembly. Provisions must be made for electric operation of the rotation system should complete loss of hydraulic power occur. The hydraulic system is to be equipped with pressure relief valves that will limit the rotational torque to a non-destructive power.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.11 STROBE LIGHT:**

A white strobe light shall be provided under the lower section of the ladder tip and shall flash any time the aerial ladder is in operation.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.12 STABILITY WARNING SYSTEM:**

An audible and visual alarm system shall be provided to indicate if a load is placed on the aerial that exceeds its capacity rating in all positions of operation. The alarm system shall include a minimum 100dba output audible alarm and a pressure gauge showing AFE/CAUTION/OVERLOAD zones at the turntable control station. A visual alarm shall also be provided which includes a 360 degree amber strobe on each side of the tip section of the base section.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.13 STABILIZERS:**

Two (2) sets of extendible out and down stabilizers shall be provided for maximum stability. The stabilizers shall have a stance of a minimum of 14 feet, but not to exceed 16', 6". Vertical stabilizer cylinders to have a 5.00" internal diameter bore and 3.00" rod. The cylinders shall be equipped with integral holding valves which will hold the cylinder within the stowed position or the working position should a charged line be severed at any point within the hydraulic system.

Extension of the horizontal beams shall be accomplished by an extension cylinder which has a 2.00" internal bore and 1.00" cylinder rod. The stabilizer control stations are to be located at the rear of the apparatus, one each side, arranged so that the operator has full view of the stabilizer being positioned. Controls shall be illuminated for night operation. Control stations to be enclosed to prevent accumulation of dirt. Both stabilizer control functions shall operate independently and provide intermediate positioning so as to allow for set up in congested areas and provide leveling capabilities on uneven terrain. An electrically controlled diverter valve with manual override shall be provided in conjunction with the stabilizer controls as a safety device. The diverter valve shall allow the hydraulic fluid to flow either to the stabilizer circuit or the turntable and ladder circuit, but not simultaneously. Bubble type leveling indicators shall be provided. A floating type pad shall be provided on each stabilizer. The pad shall require no stabilizer adjustment during set up. The pad shall pivot in a 360 degree plane for set-up on uneven terrain. Stabilizers to have a minimum of 12.00" ground penetration to allow the operator to set up on uneven terrain. A set of four (4) auxiliary ground pads with handles are to be provided for additional load distribution on soft surfaces. The pads shall be approximately 29.00" square and shall be constructed of minimum .38" aluminum. Plates shall be mounted below body adjacent to each stabilizer.

To illuminate the area around the stabilizers, a clear floodlight minimum 4.00" shall be provided at each stabilizer location. Lights to activate through the aerial master switch.

A Whelen 900 Strobe red warning light shall be flush mounted into each stabilizer cover panel. These lights shall be activated by a separate switch on the master switch panel in the cab.

In addition a 6.00" red double faced warning light shall be mounted above and below each outrigger and shall be visible from either direction. These red warning lights will only be seen when outriggers are deployed. They shall be activated through the aerial master switch. There shall be a 2" inch reflective stripe on each side of the stabilizers.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.14 ROTATION INTERLOCK:**

A rotation interlock system shall be provided that limits aerial platform rotation in the direction that the stabilizers have been not fully extended. A manual electric override shall also be provided to override the rotation interlock system. This manual override shall be located at the lower control station so that activation shall require two (2) people per NFPA 1901.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.15 MASTER CONTROL STATION:**

A master control station shall be located at the rear of the apparatus. The controls and indication labels shall be illuminated for night operation.

The following items shall be furnished at the rear control station;

1. Aerial PTO engaged light
2. High idle switch
3. Diverter valve Stabilizer/Aerial control with green position indicator lights
4. Diverter valve manual override with red flashing light
5. Emergency 120/240 volt hydraulic pump control with red indicator light
6. All aerial circuits breakers, interlock components and control circuit distribution terminals shall be enclosed in a water tight compartment that is easily accessible. Doors to be provided over all outrigger controls and rear control panel switches.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.16 AERIAL CONTROL STATION:**

There shall be one (1) main control panel at the left side of the turntable. The following items shall be installed at the turntable control station and shall be lighted for night time operation;

1. Elevation, rotation, and extension/retraction valve controls
2. Automatic nozzle controls
3. Green indicator light for ladder rung alignment
4. Engine high idle control switch
5. Elevation indicator mounted on base section next to console
6. Intercom controls
7. 5,000 PSI hydraulic pressure gauge
8. Stability gauge and overload warning horn
9. 120/240 volt emergency power control with red indicator light.
10. Prove-out indicator alarm test button to test all indicator and alarm systems
11. Ladder/tracking 12V light control switch
12. Load capacity chart adjacent to console
13. A minimum of three (3) turntable work lights to illuminate walking surfaces
14. "Stabilizer not properly set" indicator light and alarm
15. Span Flowminder or equivalent

The following aerial controls shall be provided at the pump operator's panel;

1. Automatic nozzle controls
2. Intercom controls
3. Elevation, Rotation, Extension/retraction valve controls
4. Green indicator light for ladder alignment.
5. Engine high idle control switch.
6. Ladder/tracking 12 light control switch.
7. "Stabilizer not properly set" indicator light and alarm.
8. Span Flowmeter or equivalent

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.17 HIGH IDLE ACTUATOR:**

The high idle actuator shall be used to raise the engine RPM to a preset level for aerial operations. A high idle switch shall be installed at the lower (stabilizer) control station and turntable control console. This system must include a safety device that allows activation of the high idle only when the parking brake is set and the transmission is placed in neutral. The high idle system must automatically disengage when the fire pump is put into gear.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.18 POWER TAKE-OFF/HYDRAULIC PUMP:**

The apparatus shall be equipped with a power take-off driven by the chassis transmission and actuated by an electric shift located inside the cab. PTO must be "HOT SHIFT" type. An amber light shall be installed in the cab to notify the operator that the PTO is engaged. The hydraulic system shall be equipped with a load sensing type hydraulic pump. The hydraulic pump must produce necessary pressure for a function or multiple functions upon demand. The pump shall be capable of creating sufficient flows to allow elevation, rotation, and extension or retraction simultaneously without noticeable loss of speed to any one function. The pump shall supply oil only when the ladder is in motion, thereby preventing overheating of the hydraulic oil.

Due to the fact there may be a time when the pump operator would have control of the RPM of the engine, units that cannot feather the aerial device at any speed or must operate at low idle for feathering will not be accepted.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.19 HYDRAULIC SYSTEM:**

The tubing and hoses used in the hydraulic system shall have a minimum 4 to 1 safety factor, based on burst pressure. All hoses and tubing shall be properly sized to minimize heat build up during prolonged periods of operation. The hydraulic reservoir shall have a capacity sufficient in size that auxiliary coolers are not needed. Hydraulic tank must be equipped with a sight gauge or dipstick for easy monitoring of the oil level. The tank shall have an in-tank replaceable filter with a minimum 10 micron filtration. In addition a 10 micron, 50 GPM in-line filter shall be provided with an electrical sensing unit for the hydraulic system installed after the hydraulic pump and ahead of any components in the main hydraulic system.

The hydraulic tank shall be equipped with two (2) pickup tubes. One (1) for normal operation and one (1) for the 120/240 volt emergency power unit. The emergency pick-up tube shall extend further down into the oil tank to provide for some reserve oil in case a hydraulic line is broken.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.20 EMERGENCY PUMP:**

The apparatus shall be equipped with a 120/240 volt emergency hydraulic pump that operates from the chassis generator system. A momentary switch with red indicator light to be provided at the rear control station and at the turntable control console.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.21 HYDRAULIC SWIVEL:**

The aerial ladder shall be equipped with a high pressure hydraulic swivel which will connect the hydraulic lines from the hydraulic pump and reservoir through the rotation point to the aerial control bank. The hydraulic swivel shall allow for 360 degree rotation. A high pressure manifold block with test ports shall be located at the turntable to allow testing of any and all aerial functions.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.22 ELECTRIC SWIVEL:**

The ladder shall be equipped with an electric swivel to allow 360 degree rotation of the aerial while connecting all electrical circuits through the rotation point. A minimum of 16 collector rings shall be provided that are capable of supplying 20 amp continuous service. All collector rings shall be protected against condensation and corrosion.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.23 WATER SWIVEL:**

Water shall be transferred to the aerial waterway by means of a 4.00" internal diameter straight through water swivel permitting 360 rotation. A 4" inside diameter pipe waterway swivel is to be routed through the rotation point swivel up to the heel pin swivel. The heel pin swivel shall allow the water to flow to the ladder pipe while elevating the aerial ladder from -6 degrees to 80 degrees. The heel pivot shall not be integral with the waterway swivel at any point. This waterway design shall allow servicing of the waterway swivel without having to disturb the heel pivot pin. Waterways to be equipped with a rubber main seal and also a nitrile wiper seal. The seals must be capable of withstanding temperatures in excess of 250 degrees and shall have resistance to all foam generating solutions. The seals shall be internally lubricated. One Elkhart SM1250 Scorpion monitor with a 1250 GPM variable stream nozzle shall be provided. The monitor's functions shall be controlled from the turntable, pump operator's panel, and the tip of the ladder. There shall be a courtesy light at the tip of the ladder to illuminate controls.

The aerial shall be capable of discharging 1250 GPM at 100 PSI parallel to the ladder and 90 degrees to each side of center at 0 degrees elevation. A Span Flowminder or equivalent shall be provided at the turntable with a range of 0-1500 GPM.

A 2.50" preset pressure relief valve shall be provided in the waterway system. It shall be designed to protect the aerial waterway from excess pressure.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.23.1 POSITIONABLE WATERWAY:**

The aerial ladder waterway monitor shall be capable of being positioned at either the fly section or at the next lower section of the ladder.

The monitor location shall be changeable by the use of a single handle, located at the side of the ladder.

The handle, attached to a cam bracket, shall simply be moved forward to lock the monitor at the fly section and back to lock it to the previous section.

There shall be no pins to remove and reinstall.

The monitor shall be operational at all times, regardless of its position, without connecting or disconnecting electrical lines.

The waterway shall be pre-piped with a "Standpipe Option" and equipped with a 2.5" outlet to which an Elkhart BG -104A water thief w/ pressure gauge shall be attached.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.24 COMMUNICATION SYSTEM:**

A three-way Atkinson communication system shall be provided between the turntable control station, pump operator's position, and the tip of the aerial ladder. A self-contained "hands off" speaker microphone shall be located at the ladder tip that shall require no operator attention to transmit or receive. **NO EXCEPTIONS**

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.25 SPOTLIGHTS:**

Three (3) Collins FX-12 750,000 candle power 12 volt spot/flood lights shall be provided. One (1) installed at ladder tip and two (2) installed on lower base section as tracking lights. All lights are to be controlled from a single switch at the turntable control station and an individual switch on each light. (Light positioned at tip shall be installed in a manner which will limit overhang outside ladder beams / rails to be discussed at pre-construction meeting.)

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.26 AERIAL ACCESSORIES:**

The following items shall be provided and installed;

1. One (1) Firehooks Unlimited Pick Head Axe with 36" handle F type at ladder tip
2. One (1) 8' Firehooks Unlimited universal hook at ladder tip.
3. One (1) 10' Alco-Lite folding ladder at ladder tip
4. One (1) set of stainless steel brackets for mounting of stokes basket on outside of ladder base section.
5. One stokes basket to be specified by The City of Fort Lauderdale.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.27 AERIAL AIR SUPPLY:** Breathing air shall be provided to the tip of the aerial device and shall incorporate a 277 cubic foot 2400 PSI cylinder with regulator, two gauges, 50' refill line, 400 pound system alarm, Teflon hose with stainless steel braided cover, grade "D" filter, one Hansen fitting, and one (1) Scott mask with quick disconnect.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.28 PAINTING OF AERIAL ASSEMBLY (Steel Aerial Requirements):**

To assure the utmost protection against corrosion, the sub-assemblies and weldments shall be primed and painted prior to assembly; if fabricated from steel. Each ladder section shall be shot-blasted after U.L. testing for removal of any contaminants. Ladder assemblies shall be Zinc Chromite Primed and individually painted white in polyurethane paint, Sikken's or equal. There shall be no additional welding or drilling of new holes after painting.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.29 AERIAL MANUALS:**

Manufacturer shall provide four (4) operator and maintenance manuals. Four (4) sets of wiring diagrams pertaining to the aerial device shall also be provided.

Manufacturer shall also provide four (4) instructional videos covering operations and daily maintenance. Video shall be professionally prepared.

Does your bid comply with this requirement?

YES ( )

NO ( )

**12.30 NOT USED**

**12.31 INSPECTION CERTIFICATE:**

A third party inspection certificate for the aerial device shall be provided upon delivery (No Exceptions). The aerial device shall be certified by Underwriters Laboratories Inc. in accordance with NFPA Standard 1901 (current edition) during construction and after assembly. Inspection certificate must be a Type 1 Certificate of Inspection that includes testing of all welds during construction prior to assembly.

Does your bid comply with this requirement?

YES ( )

NO ( )

**13.0 PREPARATION FOR PAINTING, COLOR, AND MARKINGS.**

**13.1 Color, Paint, and Finish:**

As required in paragraph 6-3.1 of NFPA 1901 the apparatus shall have all exposed metal, surfaces not chrome plated, stainless steel or bright polished aluminum diamond plate thoroughly cleaned, prepared and painted in the colors required by this specification. The aluminum surfaces shall be properly etched using a high pressure and high temperature etching system. All steel surfaces shall be properly treated using a minimum of three (3) phase, high temperature, cleaning/phosphatizing system. All irregularities in paint surfaces shall be rubbed down and all seams shall be caulked before the application of the finish coat. Both the cab and body shall be painted.

Does your bid comply with this requirement?

YES ( )

NO ( )

13.2 All removable items such as brackets, compartment doors, door hinges, trim moldings, ect. shall be removed and painted separately to insure finish paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly. Both aluminum and steel surfaces to be painted shall be primed and followed with one (1) component primer that is compatible with the finished coat.

Does your bid comply with this requirement?

YES ( )  
NO ( )

13.3 The apparatus shall be finish painted with a high quality urethane topcoat. The paint finish shall have a surface gloss of no less than 90.00 percent reflection measured on a 60 degree geometry.

Does your bid comply with this requirement?

YES ( )  
NO ( )

13.4 Prior to reassembly and reinstallation of lights, handrails, door hardware, trim moldings, and any other miscellaneous items, shall have an isolation tape or gasket material must be used to prevent damage to the finish painted surfaces. **NO EXCEPTIONS.** A nylon washer shall be installed under each acorn nut or metal screw that is fastened directly to a painted surface.

Does your bid comply with this requirement?

YES ( )  
NO ( )

13.5 The exterior body paint and priming components to be used are to be Akzo Sikkens brand OR Dupont 6000 series. The manufacturer's painted components shall have a paint film not less than 1.25 mils. thick and a minimum total thickness of 7 mils., including primers. The final film of painted surfaces shall be uniformed smooth, clear and mirror finished, free of grit, streaks, blushing, runs, sagging, blisters, fish-eyes, orange peel, pinholes, swirls or other surface irregularities.

Does your bid comply with this requirement?

YES ( )  
NO ( )

13.6 The painted exterior sheet metal body shall be capable of withstanding 250 hours of salt spray tested in accordance with ASTM B 117-64. The specimen used for the salt spray test shall be run through all steps of the cleaning and treating process, including priming. The painted specimen shall be scored from corner to corner using a sharp knife. After the test, the specimen panels shall exhibit no failure and not more than 1/8 inch rust or blister creep age from the scored lines.

Does your bid comply with this requirement?

YES ( )  
NO ( )

13.7 Paint Color and Design. The final paint color and design shall match existing vehicles in this Agency's fleet. The red shall be Sikkens, 3247, Vermillion, Red. The white shall be Sikkens, 4002, White. Final paint colors and application areas shall be finalized at the pre-construction conference.

Roll up compartment doors shall be left unpainted in a "natural" bright silver / metal color.

Does your bid comply with this requirement?

YES ( )  
NO ( )

13.8 The cab and body shall be painted red and the cab roof from the drip rail up shall be painted white.

Does your bid comply with this requirement?

YES ( )  
NO ( )

**13.9** The vehicle exterior finish shall be warranted against blistering, peeling, bubbling, lack of adhesion or any other manufacturing or material defect for a period of six (6) years. The unit shall also be warranted against corrosion perforation for a period of ten(10) years. **NO EXCEPTIONS.** A copy of the manufacturer's warranty shall be included with the bid.

Does your bid comply with this requirement?

YES ( )

NO ( )

**13.10 Emblems and Markings:**

The apparatus shall include plastic signs that say {CAUTION: CLEARANCE HEIGHT 10' 8"} For CUSTOM FIRE PUMPERS and {CAUTION: CLEARANCE HEIGHT 12' } For QUINT AERIAL APPARATUS. There shall also be a sign that says {CAUTION: REMEMBER TO SET PARKING BRAKE} for both type of vehicles.

Does your bid comply with this requirement?

YES ( )

NO ( )

**13.11 Undercoating:**

The vehicle shall be under coated for sound deadening, corrosion, and stone damage protection. A commercial, sandless, petroleum base undercoating or other materials providing equivalent protection, shall be applied to the underbody and under chassis sheet metal surfaces to a thickness of 1/8 inch. The following areas shall remain free of undercoating material: drive shafts, drain holes, lubrication points, engine/transmission oil pans, fuel tanks, heavy castings, suspension components, heat shields, heat diffusing devices, catalytic converters, and the exhaust system(s), as well as other areas specifically excluded by the chassis manufacturer.

The following areas do not require coverage: chassis frame, underside of engine compartment hood, underbody surfaces in excess of 1/8 inch thickness, areas inaccessible without removing vehicle fuel tank(s), or other major components.

Does your bid comply with this requirement?

YES ( )

NO ( )

**13.12 Striping and Lettering:**

The striping and lettering shall match the current design used by the Fire Department. Each proposer shall be responsible to include any costs needed to match the current design. In addition to the current standard, an American flag waving emblem shall be painted and clearcoated on the cab grille. Two "911" memorial type emblems will also be installed on the vehicle near the front directional lights on the side fenders. Selection of these emblems will be from the standard offering of the manufacturer. Grade ASTM Type 2 Reflective Caution tape to be placed on all cab doors (inside) and steps.

Does your bid comply with this requirement?

YES ( )

NO ( )

**14.0 QUALITY ASSURANCE PROVISIONS.**

**14.1 Workmanship.**

Defective components shall not be furnished. Parts, equipment, and assemblies, which have been repaired or modified to overcome deficiencies, shall not be furnished without the written approval of this Agency. Welded, bolted, and riveted construction utilized shall be in accordance with the accepted standards of the industry. Component parts and units shall be manufactured to definite standard dimensions with proper fits, clearances, and uniformity. The general appearance of the vehicle shall not show any evidence of poor workmanship.

Does your bid comply with this requirement?

YES ( )

NO ( )

**14.2** The following shall be cause for vehicle rejection at time of delivery:

1. Rough, sharp, or unfinished edges, burrs, seams, sharp corners, joints, cracks, and dents.
2. Non-uniform panels. Edges that are not radiused, beveled, etc.
3. Paint runs, sags, orange peel, "fish eyes", swirls, etc., in addition to items listed in paragraph 2.4 of this specification and any other imperfection or lack of complete coverage.
4. Body panels that are uneven, unsealed, or contain voids.
5. Misalignment of body fasteners, glass, viewing panels, light housings, other items with larger uneven gaps, spacing, etc., such as door, body panels, and hinged panels.
6. Improper body design or interface with the chassis that could cause injury during normal user maintenance.
7. Improperly fabricated and routed wiring or harnesses.
8. Improperly supported or secured hoses, wires, wiring harnesses, mechanical controls, etc.
9. Loose, vibrating, abrading body parts, components, subassemblies, hoses, wiring harnesses or trim.
10. Interference of chassis components, body parts, doors, etc.
11. Leaks of any fuel, vacuum, or fluid lines, (AC, coolant, oil, air, etc.)
12. Noise, panel vibrations, etc.
13. Sagging, non-form fitting upholstery or padding.
14. Incomplete or incorrect application of undercoating or rust proofing.
15. Inappropriate or incorrect use of hardware, fasteners, components, or methods of construction.
16. Incomplete or improper welding.
17. Visual deformities.
18. Lack of uniformity and symmetry where applicable.
19. Unsealed appurtenances or other body components, gaskets, etc.

In addition, any deviation from the requirements of this specification, unless previously approved by this Agency, that affects form, fit, function, durability, reliability, safety, performance or appearance shall be cause for rejection.

**14.3 Responsibility for Inspection and Tests.**

The Bidder is responsible for the performance of all inspections and test requirements specified herein. The Bidder may use his own or any other facilities suitable for the pre-delivery and acceptance inspections unless disapproved by this Agency. This Agency reserves the right to perform any of the inspections and tests set forth in - this specification where such inspections are deemed necessary to assure supplies and service conform to the specification and contract.

The Bidder shall provide this Agency's inspection representatives with instruments and all such assistance as they may find necessary.

Does your bid comply with this requirement?  
 YES ( )  
 NO ( )

**15.0 TESTS.**

**15.1** The Bidder is responsible for submitting all required NFPA testing results for the proposed fire apparatus, items, systems, and equipment. In addition, the City may elect to conduct other tests, as noted below, to determine that the system or component meets the requirements as set forth in the technical specifications.

The paragraph numbers referenced below are those of the National Fire Protection Association's pamphlet 1901 and Fort Lauderdale Fire Rescue Department.

- A. Apparatus Physical Dimensions.  
NFPA (3.1 through 3-1.2)

Does your bid comply with this requirement?  
 YES ( )  
 NO ( )

- B. Vehicle Weight Distribution.  
NFPA (4.4.3 and 4.4.3.1)

Does your bid comply with this requirement?  
 YES ( )  
 NO ( )

- C. Road Test and Performance Tests.
- D. Electrical Systems and Components.
- E. Electrical Generating System.
- F. Electromagnetic Radiation and Suppression.
- G. Warning Light and Siren System(s).
- H. Tests of Apparatus Body Structure.
- I. Crew Cab Compartment Interior Surfaces
- J. PTO Generator System and Tests.
- K. Cab and Crew Compartment Sound Level Test.
- L. Cab and Crew Compartment Air Conditioning Level Test
- M. Painting, Color, and Marking.
- N. Manuals, Handbook, and Warranties.

Does your bid comply with this requirement?  
 YES ( )  
 NO ( )

**16.0 EXCEPTIONS.**

**16.1 Listing of Exceptions to Specifications.**

**ANY** exception(s) or clarification(s) taken to the requirements of these specifications shall be explained in full and referenced by paragraph number. Attach an additional page or pages if more space is needed.

## **PART V - REQUIREMENTS OF THE PROPOSAL**

### **ELIGIBILITY**

To be eligible to respond to this Request For Proposal, the contractor shall have been in the business of producing vehicles similar to those specified in this Request For Proposal for at least five (5) years and to have delivered at least (30) of such vehicles. Each bidder shall provide a detailed user's list for purchaser's review, which shall include names, addresses and contact phone numbers.

### **SUBMITTAL REQUIREMENTS**

Six (6) complete sets of the proposal for Purchase of Fire Trucks are required to be submitted on or before 2:00 p.m 3/11/04 to The City of Fort Lauderdale Purchasing Department, Room #619, 6<sup>th</sup> Floor, City Hall, 100 North Andrews Ave., Fort Lauderdale, Florida 33301. One (1) set is to be clearly marked 'ORIGINAL' and is to become the official file copy.

All proposals must be submitted as specified on the proposal pages which follow. Any attachments must be clearly identified. To be considered, the proposal must respond to all parts of the RFP. Any other information thought to be relevant, but not applicable to the enumerated categories, should be provided as an appendix to the proposal. If publications are supplied by a proposer to respond to a requirement, the response should include reference to the document number and page number. This will provide a quick reference for the evaluators. Proposals not providing this reference will be considered to have no reference material included in the additional documents.

All proposals must be submitted in a sealed package with the RFP number, due and open date, and RFP title clearly marked on the outside. If more than one package is submitted they should be marked 1 of 2, etc.

The proposal shall be signed by a representative who is authorized to contractually bind the Contractor.

### **Submittals:** (To be indexed and submitted in the order listed)

- A. Letter of Interest / Cover Letter** - Briefly state the Proposer's understanding of the services to be rendered, and make a positive commitment to perform according to the requirements noted in this RFP. Followed by your signed PROPOSAL SIGNATURE PAGE (pg. #7).
- B. Professional Licenses and Certificates; Insurance** – Submit a copy of all Licenses, Certificates, Registrations, Permits etc. that your company / staff possesses – to include, but not be limited to occupational, state and local, registrations, safety certificates, etc.. Company must be licensed and/or registered in the State of Florida in all required disciplines – **Also include proof of insurance in this section.**
- C. Company Profile** – Legal name, address, Telephone number, Fax number, E-mail address, Web page address, etc. of the proposer, together with legal entity( corporation, partnership, etc.) Firm must be established as a legal entity in the State of Florida. Provide years in business; State whether the firm is local, regional, or national; Give a list of owners and/or partners and managers of the firm. Include names, addresses and phone numbers; briefly describe your facilities and capabilities; any additional information that your firm wishes to supply to augment its proposal.
- D. Joint Venture** – If Submitting as a joint venture, submit a copy of the joint venture Agreement including the financial agreement between the parties and the percentage of participation of the parties.
- E. Disputes, Litigation and Defaults** – Applicant shall disclose the results, including amount of settlement, if any, for all prior litigation, arbitration, mediation or other claims involving the applicant or any consultants for a period of five years prior to the submission of this proposal.

**F. Specifications-** Vehicle specifications must be submitted in the format specified in PART IV - TECHNICAL SPECIFICATIONS / SCOPE OF SERVICES. Complete specifications as indicated should be responded to item by item. **All subheadings under this section should be indicated in your submission.** Items that do not pertain to your vehicle should be indicated with a 'N/A' symbol. If your vehicle offers additional items please indicate those items, under the appropriate heading, with an '\*' symbol or other such notation. Proposal should also include a separate sheet to represent every deviation (itemized by subheading and number) to the specifications.

**G. ENGINEERING BLUEPRINTS** - In order to fairly evaluate each vendor's technical ability and design capability, two (2) complete sets of blueprints are to be provided. All prints submitted should be on the same size paper and to the same scale.

Blueprints are to be on "D" size paper, 24"x 36" in size, all views must be on ½" = 12" scale. CAD prints are preferred.

The blueprints are to be provided as follows:

- Interior floor plan (overhead)
- Right hand section view interior
- Left hand section view interior
- Appropriate section views interior
- Exterior Left, Right, Front, Rear and Top Views

Prints must show location of all under floorline items including, but not limited to: fuel tanks, water tanks, auxiliary battery systems, compartments, generator, and leveling system jacks and pump.

The blueprints must be completed by Vendor exactly to purchaser specifications and must be submitted with proposal.

**H. References**

Vendor must have established a permanency in the industry for a minimum of five (5) years. Include in the proposal a list of seven (7) vehicles of similar (or greater) size and complexity built in the last year or twenty in the last four years. List to include:

1. Customer
2. Contact Name
3. Phone Number
4. Unit Cost
5. Application
6. Date of Order
7. Date of Delivery

Due to the type of circumstances this vehicle will be used in, the City requires stringent standards of the entire vehicle and all components. Vendors are required to provide a list of references where similar wiring specifications were involved. It is imperative that the bidder demonstrates experience and knowledge of this caliber of vehicle.

**I. Manufacturer's Service Requirements / Procedures For Service**

Vendor must stock a complete line of special service equipment and parts for this apparatus. Bidder must be able to supply 90% of parts required to maintain this vehicle within 24 hours and have the balance available within 72 hours. Note: the purchaser reserves the right to request certain items be shipped during our evaluation process to verify proposers ability to comply. Failure to respond as stated will be considered in your overall evaluation. **A copy of their warranty must be included in this bid package outlining procedures for service.**

**J. Warranty Requirements**

Vendor must detail warranties covering the chassis, body and interior. This must be submitted with bid. If supplier has extended warranties available, they are to be detailed. Submit copies of Warranties. Consideration for award may be given to vendors with the best warranties.

Must also include, but not be limited to the following:

Structural integrity, corrosion perforation of cab and body: \_\_\_\_\_

Defective parts and/or components, improper design or engineering; poor or improper workmanship; Quality control techniques: \_\_\_\_\_

Engine and Transmission (100% parts and Labor): \_\_\_\_\_

Axle: \_\_\_\_\_

Frame Rails: \_\_\_\_\_

Water tank (See section 7.1): \_\_\_\_\_

Water Pump: \_\_\_\_\_

Exterior Finish (See section 13.9) : \_\_\_\_\_

Any additional warranties / Guarantees: \_\_\_\_\_

**K. Delivery Schedule** - Proposers shall indicate their delivery schedule. This delivery shall be indicated as number of calendar days After Receipt of Order (ARO). Proposers should be aware that a prompt delivery, high quality apparatus and continual support are critical to the City, and the Department. Provide a time line of deliverables as part of the project approach. The firm shall propose and provide a scheduling methodology for effectively managing and executing the work in the optimum time. The City will impose all available penalties if the contractor does not comply with this proposed delivery schedule or delivers a product not as specified.

**L. Qualifications / Experience** - Provide a detailed technical narrative demonstrating your firm's knowledge and experience of the complicated procedures inherent in the scope of work as indicated. Include number of years experience your firm has had in producing similar vehicles, Staff knowledge, Information on facilities, In house production capabilities (which manufacturing functions you perform in-house – see item 2.11).

**M. Required Documentation**

1. Letter from an independent third party testing agency stating they approve the steering cramp angle (See section 3.8).
2. Letter from engine manufacturer (See Section 3.12.1)
3. Complete electrical load analysis worksheet (See Section 4.1.2)
4. Wiring documentation from apparatus manufacturer (See Section 4.3)
5. Cab crash test certification; Personnel safety systems suggestions (See section 6.3)
6. Exterior Finish Warranty (See section 13.9)
7. Detailed Users List (See Part 1 item # 5)
8. Manufacturers Load Chart (See section 12.2 ladder)

- 9. Provide details of quality control systems and standards that relate to your manufacturing operations. (See section 2.1)

**N. Cost / Financial Proposal**

\*Provide any attachments to your proposal after Item 'N'

PROPOSERS MUST SUBMIT AN IDENTIFIED ORIGINAL COPY  
PLUS FIVE (5) COPIES OF THE PROPOSAL PAGES  
INCLUDING ANY ATTACHMENTS

THE ABOVE REQUIREMENT TOTALS SIX (6) COPIES OF YOUR PROPOSAL

The proposer understands that the information contained in these Proposal Pages is to be relied upon by the City in awarding the proposed Agreement, and such information is warranted by the proposer to be true. The proposer agrees to furnish additional information (if required), prior to acceptance of any proposal, relating to the qualifications of the proposer, as may be required by the City.

**Part V - CONSIDERATION FOR AWARD/AWARD PROCEDURES**

The award of the contract will be based on certain objective and subjective considerations list below:

- 1. How well the equipment proposed meets the requirements of the Technical Specifications contained in this request for proposal and the proposed production and delivery schedule.  
**(Maximum points available are 40)**
- 2. Experience, qualifications, past support, and performances of the proposing firm including: The amount of assembly performed in house. Design and engineering reliability factors, maintenance considerations, logistical and service support and past performance on responses to similar procurement proposals, including meeting scheduled dates. References.  
**(Maximum points available are 15)**
- 3. Estimated cost to the City.  
**(Maximum points available are 35)**
- 4. Safety Rating based on crash worthiness and design of safety systems  
**(Maximum points available are 10)**

Total points available are 100 points.

Evaluation of proposals will be conducted by an evaluation committee of qualified City Staff, or other persons selected by the City. It may be a two step process. If a two step process is determined to be required, Evaluations will be as follows: In step one the committee will evaluate all responsive proposals based upon the information and references contained in the proposals as submitted. The committee will score and rank all responsive proposals and determine a minimum of three (3), if more than three (3) proposals are responsive, to be finalists for further consideration. In the event there are less than three (3)

responsive proposals, the committee will give further consideration to all responsive proposals received. The committee will then conduct discussions, for clarification purposes only, with the finalists and re-score and re-rank the finalists proposals. The first ranked proposer resulting from this process will be recommended to the Fort Lauderdale City Commission for award. In cases where no clarifications or presentations are required, The City may recommend award from information submitted in the proposal only.

The City may also choose to enter into negotiations with the top proposer(s) Negotiations may be conducted with the first ranked proposer, and if successful, that proposer will be recommended to the City Commission for award. In the event negotiations are not successful, negotiations with that proposer will be terminated and negotiations begun with the second ranked proposer and so forth until negotiations are successfully completed to the satisfaction of the City or all proposals rejected.

The City reserves the right to award the RFP to that Proposer who will best serve the interest of the City.

Proposers or Finalists may be required to provide an oral presentation by appearing before then Evaluation Committee or by conference telephone call for clarification purposes only.

Information and references submitted will be considered in the award.

The City may require visits to customer installations or demonstrations of product by proposers as part of the evaluation process.

The City may require additional information and Proposers agree to furnish such information. The City reserves the right to award the contract to that Proposer who will best serve the interest of the City. The City reserves the right, based upon it's deliberations and in it's opinion, to accept or reject any or all proposals. The City also reserves the right to waive minor irregularities or variations to the specifications and in the bidding process.

**PROPOSAL PAGES PART I FINANCIAL PROPOSAL**

Name of Proposing Firm: \_\_\_\_\_

Proposer agrees to provide Apparatus as required in accordance with the terms, conditions and technical specifications contained in the RFP for the following price per apparatus .  
All prices are to be FOB Delivered.

**CUSTOM FIRE PUMPERS APPARATUS:**

\$ \_\_\_\_\_ Dollar  
( Price per unit in numbers ) (Price per unit in words )

**QUINT AERIAL APPARATUS:**

\$ \_\_\_\_\_ Dollar  
(Price per unit in numbers ) (Price per unit in words )

**TRUCKS SHALL BE COMPLETED AND DELIVERED IN \_\_\_\_\_ CALENDER DAYS**

(Attach your proposed delivery schedule In part V 'submittal requirements' item 'K' ( Reference: part I item #4 of specifications)

Proposer Signature: \_\_\_\_\_

Title: \_\_\_\_\_

**FINANCE OPTION**

The City of Fort Lauderdale may consider a five (5) year financing plan instead of an outright purchase. Please indicate a fixed semi annual payment amount as well as the fixed interest rate you would charge, and any discounts that you can offer the City. The City also requires a level amortization schedule. No prepayment penalty may apply. After acceptance of the apparatus by the City, semi annual payments will be made on March 1<sup>st</sup> and September 1st. **Any and all loan origination costs and fees must be borne by the vendor or lender.**

FIXED INTEREST RATE: \_\_\_\_\_ %

FIXED SEMI ANNUAL PAYMENT: \$ \_\_\_\_\_

**IMPORTANT:** INCLUDE AMORTIZATION SCHEDULE (Individual Payments must be within 0.5% of the average of all individual payments)

DISCOUNTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Please list all types and amounts of discounts your company may offer)